

LOCUS OF CONTROL IN KINDERGARTEN CHILDREN  
IN RELATION TO PARENTAL ATTITUDES

By

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To Mother, who still shares with me the joys of  
early childhood education,

To Mary Elizabeth, who believes in her husband,

and

To Dawn and David, who cannot remember a time when  
their father was not in school.

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Abstract of Dissertation Presented to the Graduate Council  
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Chairman: Dr. Theodore Landsman  
Major Department: Counselor Education

This study sought relationships between public school kindergarten children's locus of control and the locus of control and child-rearing attitudes of their parents in the areas of discipline, indulgence, protection, and rejection. These relationships were sought as clues to the origins of locus of control in the children's early home environment.

Kindergarten children and parents in the study were rural residents of a north central Florida county with a university city as the county seat. Parents whose attitudes were sampled were those who spent more time with the kindergarten children than their mates or equivalent time periods. Parents and children tested included the white ethnic majority and the black ethnic minority.

\* The subjects were 105 kindergarten children and 105 parents of these children who completed a one-session testing program at the schools of the children during two winter

months of early 1978. Eleven college graduates were trained in administering the locus of control and parent attitude tests.

The instrument used to test the locus of control of the children was the Pre-School and Primary Nowicki-Strickland Internal-External scale. Parents' locus of control was tested by the Adult Nowicki-Strickland Internal-External scale. Child-rearing attitudes of parents were measured by the Disciplinarian, Indulgent, Protective, and Rejecting scales of the Maryland Parent Attitude Survey.

Twelve hypotheses were tested for relationships of kindergarten children's locus of control and parents' locus of control and attitudes toward child-rearing. Nine hypotheses compared children's scores with adult scores on the test instruments, using Pearson's correlation formula. Three hypotheses compared children's locus of control scores with their families' ethnic status and income levels and the parents' educational levels. These three hypotheses were tested by t-tests of differences in means. The  $<.05$  level of significance was the criterion used for acceptance or rejection of the Null hypothesis.

No significant relationships were found for any of the twelve hypotheses. The lack of significant findings for the parents' ethnic group, income level, and educational level differed from most earlier studies reviewed in current literature as a background for this study.

On the average the children made more internal than external responses. The average score for the adults showed a choice of internal answers three times out of four. On the parent attitude scale the most frequently represented choice was the Protective one, followed by the Disciplinarian, Indulgent, and Rejecting categories.

The study included a discussion of considerations necessary for research with kindergarten children.

## CHAPTER I

### INTRODUCTION

#### The Relevance of Locus of Control Studies

Locus of control is the perception which persons have of whether they can or cannot control the outcomes of events that affect them. An internal locus of control is the outlook one has of being able to control the rewards or reinforcements that follow life experiences, whereas an external locus of control is the perception that these events are controlled from beyond oneself (Rotter, 1966, p. 1).

Persons are affected by locus of control outlooks in many kinds of situations from at least early elementary school years (Crandall, Katkovsky, & Crandall, 1965, p. 91) throughout life (Nowicki & Duke, 1974a). Some of the decisions one makes with regard to being in control or not being in control of events affecting persons may have profound implications. The growing child may not be able to develop a sense of separate identity as distinct from parents or siblings without the ability to distinguish his or her own control over the results of actions from that of other family members.

The development of a sense of external control can likewise be an extremely critical need. Without a sense of the limitations upon one's ability to control events, the individual might not be able to survive. It is essential to

know, for example, that pedestrians cannot stop onrushing automobiles. One needs an appreciation, too, that control is also located with others in addition to being a part of oneself, in order to get along with others. For instance, a person needs to realize that there are limitations to the amount of control that is appropriate or possible to exert over the thoughts, feelings, and behavior of others.

Locus of control, then, seems to be an essential part of the understanding of oneself and one's roles in relation to other persons and forces and appears to be involved in situations throughout life when one needs to decide what he or she can or cannot do (Rotter, Chance, & Phares, 1972). It would seem that the study of a personality construct so strategic is essential for understanding and guiding human development.

When the growth of people's perceptions of being able to control or not to control outcomes is better understood, it may be more possible to intervene in helpful ways to assist persons who wish to do so to increase their internality or externality in certain situations to enable them to carry on their lives in ways more to their liking.

One situation in which changes in locus of control perceptions might be beneficial is the counseling experience. Some counselors have reported better outcomes from counseling relationships in which clients have felt able to make changes in their ways of living and have taken

responsibility for doing so, a viewpoint related to the perception of internal control (Lefcourt, 1972; Morgan, 1967). Also at times counselors might want to encourage clients to recognize their limitations and those of others by not making unrealistic demands upon themselves and others, a recognition related to external control.

Sometimes counselors have expressed the wish that a client could have been helped sooner (Morgan, 1967), particularly in the early years of childhood, which Freud (1953) and more recent personality theorists have suggested is the primary formative time for the growth of personality, while acknowledging that, with more difficulty, people can change at other ages as well. As one looks at the growth of locus of control perceptions and considers that these basic outlooks may be formed before the child enters school (Rotter, Chance, & Phares, 1972; Crandall et al., 1965), it seems natural to look at the home and to pose questions about the relationships of parents and children in order to learn more about influences related to locus of control that might be operating there.

The kindergarten age child was chosen for the present study because it was thought that this age child is old enough to understand the instrument being used in the study to test his or her locus of control, yet still dependent enough upon his or her parents to be strongly influenced by them, and still reflecting the influences they may have had upon the child's development of locus of control.

It would seem that the attitudes which parents have about child-rearing and locus of control would relate to their behavior toward their children, and that parental attitudes and behavior, in turn, would have an important relationship to the locus of control perceptions of the children. However, as the Review of Literature in Chapter II indicates, these relationships have not been clear in some studies of parental locus of control in children.

#### The Purpose of the Study

The purpose of the present study was to give a clearer picture of the locus of control of kindergarten children and how these perceptions might vary in relation to several attitudes of parents concerning child-rearing. The locus of control views and parental attitudes under consideration, along with related terms, are defined below, followed by hypotheses which state the relationships under consideration.

#### Definitions

##### Disciplinarian

This is one of the categories of parental attitudes which the Maryland Parent Attitude Survey sought to measure (MPAS; Pumroy, 1966). Pumroy defined disciplinarian parents as those who demand strict obedience to their rules and push their children unrealistically to excel (pp. 74-75).

##### Economic Status: Higher

This grouping refers to families in the present study whose total incomes were high enough to make their children ineligible for free or reduced lunches at public schools



attended by their children (Eligibility Income, 1977).

Economic Status: Lower

This grouping refers to families in the present study whose total incomes were low enough to make their children eligible for free or reduced lunches at public schools attended by their children. (Note: The division of family incomes into higher and lower economic status on the basis of the scale used for school lunch assistance refers only to the family's eligibility or ineligibility for the lunch program based on information from the family. It does not refer to families' actual participation or lack of participation in the school lunch plan, which is privileged information.)

Educational Status: Higher

This educational status refers to parents who have received a high school diploma or its equivalent.

Educational Status: Lower

This category refers to parents who have had less schooling than completion of high school or equivalent programs.

Ethnic Majority

The ethnic groupings are defined according to which group is in the majority or minority nationally. The ethnic majority category refers to parents or children both of whose parents were from the Caucasian racial grouping.

### Ethnic Minority

This category refers to parents or children one or both of whose parents were from a non-Caucasian racial grouping. In the present study these parents were black except for one case in which one parent was Oriental and the other Caucasian.

### Indulgent

This second category of the MPAS described parents who give warmth, affection, and spontaneous treats while not providing rules and discipline (Pumroy, 1966, pp. 74-75).

### Parents

In the present study the term parent or parental refers to parents or guardians who were with their kindergarten children for a time greater than or equal to that of their spouses or who were in sole charge of the children and have been in one of those situations for more than a year. Most of the parents in the present study have been with their kindergarten children for their entire lifetimes.

### Protective

This third category of parental attitudes included in the MPAS referred to parents who keep their children from risks to the point of interfering with their learning to do things for themselves (pp. 74-75).

### Rejecting

This fourth and last category of the Maryland Parent Attitude Survey represented the attitudes of parents whose

open hostility to their children is based primarily upon their own negative feelings. This attitude also included indifference, shown in parental actions of ignoring or avoiding their children (pp. 74-75).

### Rural

This term in the present study refers to schools the majority of whose students live in towns and communities of Alachua County, Florida, outside of the Gainesville city limits.

### Hypotheses

In order that parental characteristics and their relationships to locus of control views of kindergarten children might be more fully explored, the present study focused upon the following hypotheses, which are stated in Null form:

Hypotheses One through Four involve the relationship of locus of control perceptions of parents, according to their scores on the Adult Nowicki-Strickland Internal-External scale (ANS-IE; Nowicki & Duke, 1974a), and their attitudes toward child-rearing, as measured by the four scales of the Maryland Parent Attitude Survey (MPAS; Pumroy, 1966). The four scales measured disciplinarian, indulgent, protective, and rejecting attitudes of parents.

1. There is no relationship between the locus of control of parents and their disciplinarian attitudes toward child-rearing.
2. There is no relationship between the locus of control of parents and their indulgent attitudes toward child-rearing.
3. There is no relationship between the locus of control of parents and their protective attitudes toward child-rearing.
4. There is no relationship between the locus of control of parents and their rejecting attitudes toward child-rearing.

Hypothesis number Five speaks to the relationship between the locus of control of parents as measured by the ANS-IE and the locus of control of their children as assessed by the Pre-School and Primary Nowicki-Strickland Internal-External scale (PPNS-IE; Nowicki & Duke, 1974b).

5. There is no relationship between the locus of control of parents and the locus of control of their children.

Hypotheses Six through Nine have to do with the relationship of the attitudes of parents toward child-rearing, as represented by MPAS scores, and the locus of control of their children, as indicated by scores on the PPNS-IE.

6. There is no relationship between the disciplinarian attitudes of parents and the locus of control of their children.

7. There is no relationship between the indulgent attitudes of parents and the locus of control of their children.
8. There is no relationship between the protective attitudes of parents and the locus of control of their children.
9. There is no relationship between the rejecting attitudes of parents and the locus of control of their children.

Hypotheses Ten, Eleven, and Twelve deal with comparisons of the children's locus of control scores in different ethnic and socioeconomic groups. Hypothesis Ten compares the scores of children in the ethnic majority group with those of children in the ethnic minority group. Socio-economic status is divided into economic status in Hypothesis Eleven and educational status in Hypothesis Twelve.

10. There is no difference in locus of control scores between children from the ethnic majority group and children from the ethnic minority group.
11. There is no difference in locus of control scores between children from families of higher economic status and children from families of lower economic status.
12. There is no difference in locus of control scores between children whose parents are more highly educated and children whose parents are less highly educated.

The methods for analyzing the results of the testing of hypotheses are discussed in Chapter III, Methodology, in the section on Analysis of Data, page 76. The results of the testing of the hypotheses are discussed in Chapter IV. Conclusions and implications based on an analysis of these results are discussed in Chapter V. The Review of the Literature which follows in Chapter II underlines the importance of locus of control studies and places the present study in its historical context.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### Social Learning Theory

Locus of control is a concept derived from social learning theory (Rotter, 1954, 1966; Rotter, Chance, & Phares, 1972; Phares, 1976). In the present study the theory discussed by these researchers is the one referred to by the term, social learning theory.

Social learning theory is called social because it focuses upon human beings interacting with one another (Rotter, Chance, & Phares, 1972, p. 7) in order to achieve their primary goals (p. 10). The learning aspect of the theory is its analysis of how people modify their behavior in order to achieve goals (p. 10). The theory designation refers to the utilitarian purpose of social learning theory (p. 43). The theory does not offer final statements but acts as a vehicle for understanding and predicting human behavior (p. 5). Behavior is understood as including "all human responses having an effect on the environment" (p. 15), the environment being the individual's self-perception and perception of others (p. 14).

Social learning theorists attempt "to integrate two diverse but significant trends in American psychology," the stimulus-response or reinforcement theories and the cognitive or field theories (p. 1).

From reinforcement theories comes the idea that repeated behaviors occur because the individual has learned previously that they lead to a reward (p. 10). But the reinforcement focused upon, unlike that of stimulus-response theories, is not that which reduces organic drives (p. vi) but that which meets personal needs of the individual, such as "striving for recognition, love, social acceptance, and dominance" (p. 9). The social learning theory meaning of reinforcement differs again from stimulus-response theory in that the subject is seen as being affected by the perception of whether the reinforcement is controlled by the subject or by others. "The effect of the reinforcement following some behavior on the part of a human subject . . . depends upon whether or not the person perceives a causal relationship between his own behavior and the reward" (Rotter, 1966, p. 1).

Field theories contribute to social learning theory the idea that cues in the person's environment influence his or her behavior (Rotter, Chance, & Phares, 1972, p. 8). "The unit of investigation for the study of personality is the interaction of the individual and his meaningful environment" (p. 4). This view of personality focuses on behavior learned through the experiences of having needs met by other



people (p. 10), first biological needs, later psychological needs.

The meeting of needs, or the attainment of goals, is one of the two basic principles of social learning theory. This forward-moving, directional aspect of personality is inferred from observable behavior that reaches toward the realization of these goals (p. 8). The principle describing the seeking of rewards or reinforcements is called the empirical law of effect (p. 9).

The second basic principle of social learning theory is an expectancy construct (p. 1). This is the idea that "the occurrence of a behavior of a person is determined not only by the nature or importance of goals or reinforcements but also by the person's anticipation or expectancy that these goals will occur" (p. 11).

The two basic principles of social learning theory are united in the formula statement, "Behavior potential is a function of both expectancy and reinforcement value" (p. 16). This means that the probability of a behavior's occurring (behavior potential) depends upon the desirability of the goal or reinforcement (reinforcement value) sought by the behavior plus the individual's expectation (expectancy) that the reinforcement will be realized. The personal meaning of the formula statement to an individual might be stated, simply, "How likely I am to act to achieve a goal is determined by how much I want it and how much I think I can get it."

Along with the value of goals or reinforcements and the strength of expectancy for their realization, the psychological situation, the personal meaning which a person's situation has for him or her, is a very important determinant of behavior. Each situation contains cues to which the individual responds with expectancies for the reinforcement of specific behaviors. The meaning which the cues have is based on each person's previous learning history (Rotter, Chance, & Phares, 1972, p. 37).

As a person becomes more experienced, personality becomes more stable. The individual perceives some new situations as having similarities to other previously experienced situations (1972, p. 7; Phares, 1976, p. 20). A person is seen by social learning theorists as categorizing situations along a dimension of similarity of problems to be solved and similarity of the likelihood of reinforcement. This categorizing develops in the individual various generalized expectancies related to different situations (Phares, 1976, p. 19). One especially important example of a generalized expectancy is the belief that what happens to a person is dependent upon the person's behavior or the contrary belief that what happens is dependent upon forces outside the person's control (p. 19). This perception is the generalized expectancy of internal or external control of reinforcement (Rotter, 1966).

### The Locus of Control Construct

Rotter has defined external and internal locus of control perceptions as follows:

When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him. When the event is interpreted in this way by an individual, we have labeled this a belief in external control. If the person perceives that the event is contingent upon his own behavior or his own relatively permanent characteristics, we have termed this a belief in internal control. (1966, p. 1)

Social learning theorists believe that because individuals have different learning histories, which they generalize to new situations (Phares, 1976, pp. 19-20), individual differences exist in the degree to which persons are likely to attribute personal control to a reinforcement or reward in the same situation (Rotter, 1966, p. 1).

In addition to the general dispositions that influence individuals' behavior across a wide range of situations, belief in internal or external control is also a specific belief which may apply to differences in situations. For example, even people who have a general expectancy of restricted control over their lives may feel in some specific situations that they can exert much control (Phares, 1976, p. 25). Conversely, even persons who often feel that they exert control over outcomes change their perceptions when

cues in the situation suggest it to be one in which outcomes are determined by chance instead of skill (Phares, 1976, p. 36). This hypothesis was tested by Phares (1962) in a study involving electric shock, with a skill group instructed that they could control the shock and a chance group told they could do nothing they could depend upon to reduce the shock. The skill group devised means to reduce the shock in ways significantly better than the performance of the chance group, suggesting that when people feel in control of the situation, they are more likely to use their resources to deal with threatening conditions, whereas those who feel that uncontrollable forces determine the successful outcome of their behavior are not likely to try to change the conditions (Phares, 1976, pp. 26-27).

Other studies with adults involving skill versus chance situations, with the same basic results, include James (1957), Phares (1955), James and Rotter (1958), Rotter, Liverant, and Crowne (1961), Holden and Rotter (1962), Fazio and Hendricks (1970), and Walls and Cox (1971).

Studies of skill as opposed to chance orientations with children include the Gruen and Ottinger (1969) study and the Stabler and Johnson (1970) study. In the 1969 study 91 third graders were divided into skill-oriented and chance-oriented groups in a marble-reward task, with the skill-oriented group developing strategies aimed at a solution of the problem and the chance-oriented group choosing the more

frequently-rewarded alternative. The 1970 study was with 64 five-year-old Head Start children with one group given luck and another group given skill instructions on a timed marble task. Children receiving skill directions and continuous reinforcement were the most resistant to extinction, and children given luck directions and continuous reinforcement were the least resistant to extinction (p. 335). This is similar to the findings of James and Rotter (1958) with adults. Under skill conditions, trials to extinction were longer for 100 percent reinforcement than for 50 percent reinforcement conditions, whereas under chance conditions the reverse was true. Rotter (1966) suggested that continuously reinforced subjects under skill conditions would be more resistant to extinction because they thought their skill would eventually help them to gain more rewards. Subjects under chance conditions, on the other hand, would interpret an extinction series as a change in the situation of lucky hits in the 100 percent reinforcement condition but not in the 50 percent reinforcement condition.

### Origins of Locus of Control Measures

#### Adult Scales

The first scale to measure individual differences in locus of control perceptions was devised by Phares (1955). In a Likert scale format he presented 13 items listed as external attitudes and 13 items intended as internal attitudes. Items selected in the external direction tended to predict that persons with external attitudes

would behave in a fashion similar to all subjects who were placed in a chance as opposed to a skill situation. This behavior included more unusual shifts in expectancy, smaller increases and decreases in expectancy, and less frequent shifts in either direction than those of subjects with less external scores.

James (1957) revised Phares' test, still hypothesizing that individuals who scored in the external direction would behave on an experimental task as if they had received chance instructions, whereas an internal group would perform as if they had gotten skill instructions.

Rotter, Seeman, and Liverant (1962; Rotter, 1966) continued construction of an internal-external control scale, relating it more closely to social learning theory (Phares, 1976, pp. 39-40) and trying unsuccessfully to make a scale with subscales that would make independent predictions more accurate than those of a scale measuring only a generalized attitude (pp. 40-41).

On the basis of internal consistency and validity data from two studies (Seeman & Evans, 1962; Rotter, Liverant, & Crowne, 1961), Liverant, Rotter, and Crowne refined earlier and lengthier versions of the internal-external control scale into a 29-item version which became known as the Rotter Internal-External Control Scale, often called the I-E (Phares, 1976, pp. 39-41). It is with this scale that most locus of control studies have been done (Phares, 1976).

Numerous measures of locus of control or related concepts, usually based on Rotter's (1966) definition of locus of control, have been constructed, many with little construct validity research (Phares, 1976, p. 52). A notable exception to this weakness, according to Phares (p. 53), is the Adult Nowicki-Strickland Internal-External Control scale (ANS-IE) (Nowicki & Duke, 1974a).

In their 1974 study Nowicki and Duke pointed out what they considered to be weaknesses of the Rotter I-E in order to suggest why a new locus of control scale was needed. They referred (p. 2) to criticisms of the I-E for social desirability response sets and to the denial of psychopathology by those taking the test (Joe, 1972; Feather, 1967; Gold, 1968; Altrocchi, Palmer, Hellman, & Davis, 1968; Cone, 1971; Goss & Morosko, 1970; Lefcourt & Wine, 1969). Nowicki and Duke referred also to studies which have claimed that the Rotter items "confound personal, social, political, and ideological causation" (p. 2) (Gurin, Gurin, Lao, & Beattie, 1969; Thomas, 1970; Silvern & Nakamura, 1971; Hjelle & Fink, 1972). Nowicki and Duke were especially critical of the Rotter scale for having a forced choice format and a difficult reading level, which they considered too difficult for noncollege populations. Also the Rotter scale had no parallel scale adapted for children, thus making developmental comparisons difficult. (The ANS-IE, an instrument used in the present study, is discussed further in Chapter III, Methodology.)

### Children's Measures

Bialer (1961) (with Cromwell), basing their work on previous scales of Phares (1955) and James (1957), devised the Children's Locus of Control Scale, the first internal-external scale for children. Battle and Rotter (1963) developed the Children's Picture Test of Internal-External Control. In 1968 Gozali and Bialer constructed an alternative form of the 1961 scale, both scales being used in a research program on mental deficiency. Probably the most frequently used test of locus of control in children (Phares, 1976, p. 53) is the Intellectual Achievement Responsibility questionnaire (1965) of Crandall, Katkovsky, and Crandall. The IAR, as it is called, is different from other children's scales in that it is designed to measure beliefs in control of reinforcements only in intellectual-academic achievement situations; also it yields not only a total score for internality (I) but also subscale scores representing responsibility for successes (I+) and responsibility for failures (I-).

Nowicki and Strickland (1973) developed a well-constructed (Phares, 1976, pp. 55-56) test for children in grades three through twelve, the Children's Nowicki-Strickland Internal-External Scale (CNS-IE), followed by their Pre-School and Primary Nowicki-Strickland Internal-External Scale (PPNS-IE) in 1974 (Nowicki & Duke, 1974b). (The CNS-IE and the PPNS-IE were used in the present study, so they are discussed in Chapter III, Methodology.)



Two other scales used with preschool children are the Stephens-Delys Reinforcement Contingency Interview (Stephens & Delys, 1973) and the Stanford Preschool I-E Scale (Mischel, Zeiss, & Zeiss, 1974). Both of these scales followed the approach of the IAR in having subscales to assess responsibility for successes (I+), responsibility for failures (I-), and in reporting total internal scores (I).

#### Dimensions of Locus of Control Perceptions

Although Rotter's (1966) definition of locus of control and the Rotter I-E scale in the same article concerned a generalized expectancy across several situations, efforts have been made to separate portions of the I-E and of other scales into subscales to measure the individual situations and thus to enhance prediction. Rotter, Seeman, and Liverant (1962) tried to develop subscales in what became the I-E to measure locus of control perceptions in the separate areas of academic recognition, social recognition, love and affection, dominance, social-political events, and general life philosophy, but the subscales did not generate independent predictions.

Rotter's (1966) definition of locus of control mentioned several sources of external perceptions (luck, chance, fate, powerful others, and complex forces) and two sources of internal perceptions (one's own behavior and one's relatively permanent characteristics). Rotter himself, as reported in his (1966) study, was able through factor

analysis to isolate only one general factor and several smaller factors which were not adequate for separate predictions.

Other researchers with other sample groups and sometimes with modifications of the I-E scale have separated out distinct factors. Mirels (1970) factor-analyzed the 23 locus of control items of the I-E scale and, with males and females, found two identifiable factors. These were (Factor I) a belief in mastery over the course of one's life and (Factor II) a belief in an individual's impact on political institutions. Abrahamson, Schludermann, and Schludermann (1973) replicated Mirels' study, with similar results plus some evidence for a third factor, an individual's control over his own likeability.

Re-interpreting data from an earlier study, Schneider and Parsons (1970) suggested that five categories were represented in the I-E, general luck or fate, respect, politics, academics and leadership, and success. These authors found small, positive intercorrelations among these five areas.

Using factor analysis to study the responses of black students, Gurin, Gurin, Lao, and Beattie (1969) isolated two separate factors. These were the personal control that one can exert in one's own life and general or ideological beliefs about how much control most people possess. The I-E scale was modified for this study and that of Lao (1970),

who used scores from the two above-mentioned subscales to compare them with competency scores among black college students.

Abramowitz (1973) found a significant correlation between Mirels' (1970) Factor II, an individual's impact on political institutions, and scores on the Kerpelman Political Activity Scale. Lefcourt (1972) pointed out that measurements of generalized expectancies have been criticized for masking some internal control expectancies of black subjects in distinct areas. Studies like that by Abramowitz may speak to this problem both by predicting in separate areas and by linking locus of control measures to other measures. The latter step was taken earlier, as pointed out by Lefcourt (1972, p. 27), in studies of locus of control and trust (Hamsher, Geller, & Rotter, 1968), locus of control and field dependence (Lefcourt, Gronnerud, & McDonald, 1971; Lefcourt & Telegdi, 1971), and locus of control linked to self-esteem (Ryckman, Gold, & Rodda, 1971).

With a modification of the Rotter I-E scale Collins (1974) identified through factor analysis four different views to which he said a person with an external orientation could subscribe: the world is difficult; the world is unjust; the world is governed by luck; and the world is politically unresponsive.

Another study of a modified I-E scale identified through multiple regression three distinct subscales. The

(1973) study by Reid and Ware isolated the dimensions of fatalism, the belief that luck, fate, or fortune as opposed to hard work, ability, and personal responsibility determine outcomes; social system control, the extent to which people believe they can or cannot make social or political changes; and self-control, the belief that one can control or is controlled by his or her impulses, desires, and wishes.

Levenson constructed scales based on Rotter's I-E scale to study behavior among psychiatric patients (1973a, 1973b, 1973c). Her three scales were constructed to measure beliefs about control of reinforcements in Internal, Powerful Others, and Chance dimensions.

Concerning children's scales, Crandall et al. (1965) pointed out that the Bialer [(1961) (with Cromwell) scale] and the Battle and Rotter test (1963) contained items to describe reinforcements in motivational and behavioral areas which included affiliation, dominance, achievement, and dependency but did not demonstrate a consistency of belief across these areas (p. 93). Crandall et al. were more specific with their own instrument, the Intellectual Achievement Responsibility questionnaire. The authors limited the scope of their measure to intellectual-academic achievement situations. Items were restricted to relate internal and external control only to the persons who most often come in face-to-face contact with children, their parents, teachers, and peers (p. 93). The IAR distinguished

further between responsibility for successes and that for failures.

It was felt that the dynamics operative for assuming credit for causing good things to happen might be very different from those operative in accepting blame for unpleasant consequences. . . . Belief in personal responsibility for the two kinds of events may develop at differential rates, or . . . this may be so for some children but not for others. (p. 94)

Factor analysis of the Pre-School and Primary Nowicki-Strickland Internal-External scale (PPNS-IE; Nowicki & Duke, 1974b) revealed its structure to be like that of its parent measure, the Children's Nowicki-Strickland Internal-External scale (Nowicki & Strickland, 1973). On the PPNS-IE seven items loaded high on Factor 1, a power versus helplessness factor, dealing with making people and things do what you want them to do. Eight items loaded high on Factor 2, a persistence in dealing with parents factor, involved with persistence in obtaining goals and in dealing with powerful others. Six items loaded high on Factor 3, a luck factor, concerned with fate, luck, or chance (1974b, pp. 878-879).

#### The Relationship of Locus of Control and Important Characteristics of Persons

The importance of locus of control orientations is suggested by its relationship with several descriptors of children, including age, sex, intelligence, achievement, race, socioeconomic status, and mental health.

Age. In all of the studies and instruments named in which age was considered, internality generally increased with age. Crandall et al. (1965) suggested reasons for this trend.

The dependence of young children upon others for help and emotional support is . . . a necessary condition of early development. . . . The resolution of dependence on such caretakers and the concomitant acquisition of independent problem-solving techniques are equally important requisites of normal personality development . . . . With age and experience, most children should begin to feel that their own actions are often instrumental in attaining the reinforcements they receive. (p. 94)

Nowicki and Duke (1974a, p. 4, Table 2) listed means and standard deviations for young people in grades nine through twelve (tested with the CNS-IE) and similar scores for college and noncollege adults (tested with the ANS-IE) to suggest that the tendency for internality to increase with age continues into early adulthood.

Sex. As internality generally increases with age, it is not always at the same levels for males and females of the same age. In their study of five-year-olds Stabler and Johnson (1970) reported greater persistence of girls, who responded as if they were more internally oriented than boys. On the last trial block of the continuously reinforced group, speed on the timed task of key-pressing was higher during extinction for girls.

Of the 240 children tested for construction of the PPNS-IE (Nowicki & Duke, 1974b, p. 879) five- and

six-year-old boys ( $\underline{M}=12.31$ ,  $\underline{SD}=2.33$ ) scored more internally than girls of the same age ( $\underline{M}=14.31$ ,  $\underline{SD}=2.20$ ). Seven- and eight-year-old boys and girls had the same mean ( $\underline{M}=11.45$ ,  $\underline{SD}=2.81$  for boys, 2.92 for girls).

In construction of the IAR (Crandall et al., 1965) no significant differences were reported between boys' and girls' scores on the test and retest for reliability correlations (p. 100). Those retested were from grades three, four, five, and nine. There were some differences between boys' and girls' scores in the test taken by the entire sample (grades 3-5, 6, 8, 10, and 12). Total I scores increased slightly with age with girls' scores slightly higher than those of boys, especially for the older four grades, but with no significant change in Total I for the younger or older group for either of the sexes nor for boys and girls together (p. 102).

An examination of the subscales gives a different picture, however. Between grades 10 and 12 boys showed a significant decrease in I+ scores (p. 102). Girls did not show a significant increase in I+ scores but did significantly increase their I- scores from grades 3 to 5 and from grades 6 to 12. The level of girls' I- scores by sixth grade was slightly greater than the boys' I- scores in grade 12. The girls' I- scores continued to rise during junior and senior high school. With the exception of boys' I+ scores in grades 8 and 10, girls' scores beyond the sixth

grade showed more internal responses on the I+ and I- subscales (p. 103).

In construction of the ANS-IE, Nowicki and Duke (1974a, pp. 7-8) were surprised to find among young women in college that externality on the ANS-IE was significantly related to achievement, whereas internality was related to achievement for young men in college. These results were similar to those of Pappas and Nowicki (1972) and Nowicki and Duke (1972) with young women in introductory psychology classes.

At several age levels and in comparison with some achievement measures there does not seem to be a clear picture of the relationship between male and female performance on measures to differentiate locus of control perception.

Intelligence. Rotter (1966) reported that correlations between intelligence measure scores and scores on his I-E scale were low. Similar conclusions were reached by Cardy (1962) and Ladwig (1963). Hersch and Scheibe (1967) reported low correlations of the I-E with the Otis Quick Scoring Mental Ability Test (Otis, 1954), the Terman Concept Mastery Test (Terman, 1956), and the D48 (Black, 1962). Correlations of the I-E with these measures ranged from  $-.07$  to  $.17$ . Kiehlbauch (1967) tested subjects in a reformatory and found no correlation between intelligence and I-E scale scores. Powell and Centa reported small correlations between internality and intelligence test scores (1972).



Correlations of Nowicki-Strickland locus of control scores with those from measures of intelligence were also low. Scholastic Aptitude Test (SAT) results from school records were compared with ANS-IE scores of 48 college students with a resulting correlation of  $r=.11$  (Nowicki & Duke, 1974a). Those findings were similar to earlier comparisons of ANS-IE and SAT scores in studies by Pappas and Nowicki (1972) and Nowicki and Duke (1972). Similar results were obtained with younger subjects using the CNS-IE (Nowicki & Strickland, 1973).

These findings for both children and adults suggest that locus of control scores do not measure the same attribute as intelligence test scores, that locus of control is not the same thing as intelligence.

Achievement. Using varying devices to measure locus of control and academic achievement, many studies have found correlations between internality and achievement. Studies of this relationship in children include those by Coleman, Campbell, Hobson, McPartland, Mood, Weinfeld, and York (1966); Chance (1965); Crandall, Katkovsky, and Preston (1962); Harrison (1968); McGhee and Crandall (1968); and Nowicki and Roundtree (1971). An exception to this finding is the study by Katz (1967), who used the IAR with black children and found only a small relationship between achievement and internal scores on the IAR. Using a "View of the Environment Test" Harrison (1968) found correlations of academic

achievement and perceptions of personal control among both advantaged and disadvantaged children.

In construction of the Children's Nowicki-Strickland Internal-External Scale (CNS-IE) (Nowicki & Strickland, 1973, p. 151) the authors tested children ( $N=152$ ) in grades three through nine with the CNS-IE and an achievement test (unspecified) with IQ controlled. Children with an internal orientation performed significantly better than those with external perceptions on the achievement measure. With the 240 children aged five through eight tested in the construction of the PPNS-IE (Nowicki & Duke, 1974b) there was a tendency for internality to be related to achievement test scores, but the relationship reached significance only with the girls (p. 879).

Nowicki and Duke (1974a) referred to several studies (McGhee & Crandall, 1968; Crandall, Katkovsky, & Preston, 1962; Crandall, Katkovsky, & Crandall, 1965; Nowicki & Strickland, 1973) (pp. 6-7) which have shown internality to be positively related to greater academic achievement among children, but with more consistent results for boys than for girls. Nowicki and Duke found for young college men, too, that internality on the ANS-IE was significantly related to achievement, but that for young college women externality was significantly related to achievement.

On the basis of studies reported by Phares (1976, pp. 110-111) he suggests that the relationship of locus of

control to achievement performance is more clear and consistent at the present time than the relationship of locus of control to the need for achievement, or achievement motivation.

Race. Phares (1976) referred to several studies (pp. 44-45) in which black subjects scored more externally on locus of control measures. These include Rotter (1966); Battle and Rotter (1963); Lefcourt and Ladwig (1965, 1966); Lessing (1969); Scott and Phelan (1969); Shaw and Uhl (1971); Strickland (1972); and Zytoskee, Strickland, and Watson (1971). Nowicki and Duke (1974a) referred to studies of Lefcourt (1971) and Joe (1971) reporting that black children and adults responded to locus of control measures more externally than white children. Nowicki and Duke reported additional studies in which they were involved in which middle class black college students were tested (Johnson & Nowicki, 1972) and another in which white middle class college students were tested, both with the ANS-IE. The black students scored in a significantly more external direction ( $t=6.32$ ,  $df=101$ ,  $p<.01$ ).

Socioeconomic class. Members of lower socioeconomic groups have consistently scored more externally on measures of locus of control, according to Rotter (1966) and Phares (1976). Franklin (1963) found a significant relationship between higher socioeconomic class and internality with his national stratified sample of 1,000 young people. When

Battle and Rotter (1963) tested black and white sixth- and eighth-grade children by means of Bialer's internal-external (1961) scale and a cartoon device, they observed a relationship between internality and social class. Lower socioeconomic class black children had scores significantly more external than those of middle socioeconomic class black or white children.

Cellura (1963) tested boys of lower socioeconomic status (the fourth and fifth categories of Hollingshead's 1957 index of social position) with the Bialer scale and the IAR, finding that parents of the more externally oriented children had significantly lower educational levels. Using an instrument based on the Bialer scale, Gruen and Ottinger (1969) tested third-grade children and found socially middle class children to be more internal than children in the lower social class.

Exceptions to the general finding of lower socioeconomic status related to externality and higher social class related to internality include two college studies. In Rotter's Ohio State samples of elementary psychology students (1966, p. 18), with the Warner scale, based on father's occupation used to determine social status, the students did not show significant differences in locus of control in relation to social class differences. Also with black students at Florida State University, Gore and Rotter (1963) did not find significant social class differences as

related to internal-external orientations. It should be noted that each sample group of the two studies was highly homogeneous.

Mental health. Subjects scoring in an external direction on various measures have described themselves as being more anxious than those scoring in an internal direction. This has occurred in studies which include those by Liberty, Burnstein, and Moulton (1966); Tolor and Reznikoff (1967); Watson (1967); Ray and Katahn (1968); Platt and Eisenman (1968); Goss and Morosko (1970); Hountras and Scharf (1970); Nelson and Phares (1971); Levenson (1973c); and Strassberg (1973). In their studies Butterfield (1964) and Feather (1967) found similar results, specifying a debilitating rather than simply a motivational anxiety that correlated with external scores. Lack of verification of the above findings was the outcome of studies by Gold (1968) and Bernam and Hays (1973).

Cromwell, Rosenthal, Shakow, and Zahn (1961) tested 15 white male schizophrenic patients and 13 white male control group members with an early version of Rotter's I-E scale and found the group of patients more external. Shybut (1968) and Lottman and DeWolfe (1972) found that more severely disturbed patients were more external than less severely disturbed patients in their studies.

Externality has been associated with depression in studies by Williams and Nickels (1969); Miller and Seligman

(1973); and Abramowitz (1969). Lamont (1972a, 1972b) thought the Abramowitz study to be biased by what Lamont considered pessimistic wording of external items and optimistic wording of internal items on the Rotter I-E scale, which Abramowitz used.

For the interpretation of research Rotter (1966, p. 4) and Phares (1976, p. 123) cautioned that people at both extremes of the internal-external dimension may be unrealistic and maladjusted.

The above-mentioned studies seem to indicate important relationships between locus of control perceptions and several basic personal characteristics. Generally speaking, internality seems to be associated with age, academic achievement, white racial group membership, higher socioeconomic status, and positive mental health. Locus of control does not seem to be the same kind of measurement as the assessment of intelligence. The relationship of sex to perceptions of internal or external control seems too complex at the present time for generalization.

To say that there is an association or a correlation between internality or externality and other personal characteristics is not the same as saying that one factor caused another (Isaac & Michael, 1971, p. 21). Neither is it the same as investigating the array of complex influences that contribute to the formation of various aspects of personality (Phares, 1976, p. 121). The present researcher

is discussing these facets of personality to suggest that their relationships with internality and externality have been reported by numerous studies to be so important that further studies seeking a clearer understanding of the origins of locus of control beliefs seem highly warranted.

#### Parental Influences and Locus of Control

Much more research has been done in topics dealing with the relationships between locus of control and the personal characteristics just discussed than in the origins of locus of control. But there have been studies focusing upon parental attitudes toward their children and parental behavior with them that may influence the development of the child's locus of control. Some of the more important studies are discussed below.

Chance (1965) found permissiveness of mothers, early independence training, and flexible expectations of mothers as reflected on the Parental Attitude Research Instrument (PARI) significantly related to their sons' but not their daughters' perceptions of internal control according to scores on the IAR. These results contrasted with the Cromwell (1963) report of beliefs in external control by men who retrospectively perceived their mothers as protective. Katkovsky, Crandall, and Good (1967) believed the discrepancy in findings to be due to methodological differences, such as the use of different locus of control measures and the use of retrospective reports in the Cromwell study as

compared to the direct reports from mothers in the Chance study.

Katkovsky, Crandall, and Good (1967) found that parent behaviors described as warm, praising, protective, and supportive were positively related to their children's beliefs in internal control in intellectual achievement situations as assessed by the IAR. This was less true of the I- scores of girls whose fathers were especially affectionate and nurturant. Parent behaviors of dominance, rejection, and criticality were negatively associated with beliefs in internal control.

This 1967 work included two studies using the IAR; interview data from mothers and fathers concerning their relationships with their children; a questionnaire; and the Parent Behavior Rating Scales (PBRS; Baldwin, Kalhorn, & Breese, 1949).

The first of the two studies, conducted with 41 children (23 boys and 18 girls, aged 6 years and 10 months to 12 years and 5 months) and their mothers compared IAR scores with ratings on the PBRS. The researchers found significant positive correlations between children's (especially sons') internal control scores and observers' ratings of their mothers' behavior which they rated as babying, protectiveness, approval, and affectionateness. Maternal affection correlated more highly with I- scores than with I+ scores. There was also a tendency for



daughters' I+ scores to be negatively related to their mothers' ratings of coerciveness and punitiveness.

The second study by Katkovsky et al. involved 40 families, 20 girls and 20 boys and both parents of each child. This time the IAR results were compared with data from personal interviews and from parents' answers on a Parent Reaction Questionnaire. Interview ratings of mothers' nurturance toward their sons was positively correlated with the boys' beliefs in internal control, especially on I- questions. However, the more affectionate and nurturant the father, the greater was his daughter's belief in externality. Rejection by both parents seemed to have a more externalizing effect on daughters than on sons. Mothers' dominating and controlling were negatively associated with their daughters' perceptions of internality. When the IAR scores were compared to answers on the Parent Reaction Questionnaire, fathers' positive reactions to their children's intellectual achievement endeavors, especially to their daughters', appeared to encourage, and their critical or negative reactions to discourage, their children's internal control orientations.

Katkovsky et al. concluded that although different instruments were used in the two studies, and although there were some contradictions, generally both studies indicated a high correlation between children's internality and protective, nurturant, approving, supportive, nonrejecting,

positive beliefs and actions of their parents and a low correlation of internal locus of control and punitive, threatening, and critical characteristics of their parents. In both studies paternal variables involved more significant correlations with IAR scores than maternal variables.

The authors added that different emphases are noted between the sexes in that internality with boys was closely related to their mothers' love and support, whereas exterenality with girls was closely associated with parental rejection and authoritarian control. Katkovsky et al. compared this finding to that of Chance (1965), who found IAR scores for boys but not for girls significantly related to their mothers' permissiveness and flexibility.

Shore (1968) and Davis and Phares (1969) in separate but similar studies compared different-aged young people's locus of control scores with their reports of their parents' behavior, the parents' child-rearing attitudes, and the parents' locus of control beliefs. Shore assessed junior high school boys' internal-external views by means of the Bialer (1961) scale and the Battle and Rotter (1963) Children's Picture Test of Internal-External Control and the youths' perceptions of their parents' behavior with the Children's Report of Parent Behavior Inventory (CRPBI; Schaefer, 1965). Parents were tested with the Rotter I-E scale, a scale assessing parents' expectations of personal control in child-rearing, and two instruments to measure

parental attitudes. Davis and Phares used the CRPBI, the Rotter scales, and the Maryland Parent Attitude Survey (MPAS; Pumroy, 1966).

In the shore study, among attitudes of parents only the fathers' internality in relation to child-rearing was related to internality in their sons. The more internal the father, the more internal was the son ( $r=.46$ ,  $p<.01$ ). Boys who scored more externally perceived their parents as exerting more psychological control ( $r=.22$ ,  $p<.01$ ), as being less warm ( $r=.43$ ,  $p<.01$ ), and as being less accepting ( $r=.46$ ,  $p<.01$ ).

According to the instruments used in the Davis and Phares study, among the college students who were the subjects in their study, internal students saw their parents as showing less rejection, less hostile control, less withdrawal of relations, more positive involvement, and more consistent discipline, as measured by the CRPBI. Maryland Parent Attitude Survey scores were inconclusive. Fathers of internal students tended to be more indulgent and less protective than mothers of internal students, but fathers of external students were shown as less indulgent and more protective than the students' mothers. No overall, consistent pattern was revealed relating internality or externality to the Disciplinarian, Indulgent, Protective, or Rejecting parental measures of the Maryland Parent Attitude Survey.

Both the Shore study and the Davis and Phares study showed significant differences between young people's internal and external orientations in relation to their parents' warmth and acceptance as opposed to rejection, when these parental characteristics were measured by the children's perceptions but not when assessed by the parents' expressed attitudes. Also no relationship was shown between the parents' and their children's locus of control points of view.

Epstein and Komorita (1971) reported that black children who scored externally in attribution of successes on a matching task also perceived their parents as using excessively hostile control according to their ratings on the Children's Report of Parent Behavior Inventory (CRPBI).

Loeb (1975) studied fourth- and fifth-grade boys who were highly internal and highly external according to scores on Bialer's (1961) scale; their parents were tested with Rotter's I-E scale. Each boy was seen with his mother and father separately in a structured interaction and then with both parents in a Family Rorschach. External boys more frequently had highly directive parents. Internal sons more frequently had less directive parents. These differences were greater with the mothers than with the fathers. External sons also reported more learning problems than did internal sons.

In a study in West Germany with a translation of the Children's Nowicki-Strickland Internal-External scale, Schneewind (1975) tested children aged seven through thirteen in a comprehensive study of parental socialization practices, attitudes, and goals in approximately 400 West German families. Parental socialization and goals were predictors and the locus of control scale the criterion variable in a multiple regression analysis, which resulted in a multiple correlation or  $r=.59$  for the total sample. There were marked differences when the various parent-child dyads (mother-son, mother-daughter, etc.) were analyzed separately. But Schneewind did make this overall observation:

For the total sample it can be shown that internality is significantly related to parental indulgence, tolerance, lack of manipulation, a high degree of helpfulness and parental sharing of their children's activities. Looking at those parental goals which proved to be most predictive for internal control expectations we found that parents were perceived as being less concerned about their children's obedience, submissiveness, religiosity, and social conformity. On the other hand parents of children with a high score on internality were perceived as granting more independence and personal freedom to their children. (Schneewind, 1975, p. 9)

Young (1976) questioned the perceptions of 191 public health nurses in Oklahoma concerning characteristics of alienated families who abused their children. Her hypothesis in the locus of control portion of the study was that

Parents who abuse their children, when compared to a control group, manifest significantly more powerlessness. This powerlessness interferes with their learning of the parental role, as expressed in their helplessness to deal constructively with their children when they cry, misbehave, or disobey. Their lack of knowledge of child development due to this powerlessness also leads these parents to hold unrealistic expectations of their children in areas such as toilet training, eating habits, and meeting the parents' own emotional needs. (Young, 1976, p. 8)

The nurses filled out the Rotter I-E scale according to their perceptions of selected abusive and nonabusive families. When the abusive group was compared with the non-abusive control group of families, their powerlessness score was larger ( $X^2=38.4$ , 1 df,  $p<.001$ ). This remained true when factors of race, religion, age, and occupation were held constant. The actual views of the parents and their children were not known.

Rotter (1966, p. 24), commenting upon another aspect of parental behavior towards children, said, "One obvious antecedent worthy of study would be the consistency of discipline and treatment by parents. Clearly it would be expected that unpredictable parents would encourage the development of attitudes of external control." Recent studies which seem to lend support to this expectation include Shore (1968); Davis and Phares (1969); Davis (1969); Epstein and Komorita (1971); MacDonald (1971); Reimanis (1971); and Levenson (1973a, 1973b).

One approach to explaining how locus of control influences may get from parent to child is the concept of direct teaching. Graves (1961; Jessor, Graves, Hanson, & Jessor, 1968) found locus of control differences among Ute Indians, Spanish-American children, and white subjects in an isolated tri-ethnic community. Internal scores of children correlated significantly with their mothers' direct teaching of internal control.

Other possible effects of parental influences upon children's locus of control include subtle or overt reinforcement of the child's verbalizations about locus of control beliefs; modeling effects of parental behavior; and ordinal position of birth (Phares, 1976).

The above studies have mentioned many possible influences which parents might be exerting upon their children's locus of control. Generally, parental warmth and acceptance seem to be related to internality, whereas rigid authoritarian control seems related to external views. Much more needs to be examined in all the areas under consideration. One matter of particular interest was the finding in several studies (Katzovsky, Crandall, & Good, 1967; Davis & Phares, 1969; Shore, 1968; & MacDonald, 1971) that children's perceptions or outside observers' ratings of parental behavior have related more closely to children's locus of control than have measures of parental attitudes. The present study has sought to determine how closely and in

what ways children's locus of control and parents' attitudes toward locus of control and child-rearing would relate in a study with closely controlled conditions and a larger than usual number of subjects.



### CHAPTER III

#### METHODOLOGY

The present study sought to provide a clearer understanding of the relationships of parental attitudes to the development of locus of control in kindergarten children by testing the hypotheses listed above in Chapter I, pages 9-11, using data gathered from a sample of kindergarten children and their parents.

##### The Setting

Because of the relative convenience and smaller expense of conducting studies in urban areas, where populations are concentrated and thus more accessible, it may be that people in more remote, rural sections are not selected for research as often as city populations. For this reason, and because they were expected to provide a homogeneous culture for study, the elementary schools of Alachua County which have kindergarten classes serving rural populations were selected as the location of the present study.

The school was chosen as the place for testing because it was thought to be a less threatening meeting ground than

the home and a place where parents are accustomed to going for things relating to their children's educational needs. Also the school was chosen for the convenience of the researcher and his examiners, so they would not have to make the many visits which calls to each home would involve.

### The Sample

Permission was obtained from the Alachua County School Board and the principals of the county's rural elementary schools to conduct the present study with children from the kindergarten classes of the Alachua, Archer, Hawthorne, High Springs, Newberry, Prairie View (Gainesville), and Waldo elementary schools. The combined kindergarten enrollment for those schools was 512 with an average of 73 for each school. The researcher's original plan was to test children and their parents from one randomly selected kindergarten classroom per school in order to obtain a representative sample size of approximately 100 families or roughly 1/5 of the rural kindergarten families in the county. But a pilot study conducted in January of 1978 at the Interlachen Community School in Putnam County, Florida, indicated that a low response rate of parents who would grant permission to include them and their children in the larger study might be expected. For this reason the participation of all available kindergarten children in the seven schools was sought for the Alachua County study.

After the elementary school principals, in consultation with their kindergarten teachers and guidance counselors, approved the study, the researcher had two meetings with these school staff members at each school to determine the best way to obtain the fullest participation of parents in the study and to draft a letter to the parents inviting them to an event at which the study would be presented. In the letter the researcher offered to parents an opportunity to learn more about their children by taking the tests and by discussing the results of parents' and children's tests with the researcher. In the letter (see Appendix A) the researcher invited parents to a meeting at the school for an explanation of the study and for refreshments of coffee, tea, or hot chocolate and doughnuts. Also in the letter was stated the day and time of the meeting according to what school authorities thought was the time when parents would best respond. These school staff members also discussed with the researcher what type of event could be related to the meeting to explain the study in order to bring out the most parents. One school had an open house and a Valentine party; at another school parents were invited to have a free lunch at school with their kindergarten children; another school had a parents' night at which their kindergarten children conducted a gymnastics program led by their coach. Also at each school the researcher requested that, if possible, a homeroom mother or an aide would phone those parents who had phones

to invite them to the meeting to hear the study explained by the researcher.

The letters inviting the parents to the meeting were sent home by way of the kindergarten children. The sample tested consisted of the kindergarten families in which parents attended the meeting; parents signed informed consent forms granting permission for the children and the parents to participate in the study; and those families in which the children's test and the two adult tests were completed. There were 106 families meeting this description until one father and mother decided to withdraw their permission, leaving the final sample size of 105 kindergarten children and their 105 parents.

#### Collection of Data

Those who administered the tests were 11 college graduates, 8 belonging to the ethnic majority and 3 from the ethnic minority. All were women except one, a man who was a graduate student in Counselor Education. One of the women was a guidance counselor in an elementary school, and three had been teachers. These examiners were led by the researcher in a two-hour training meeting in December, 1977, during which time parts of the tests were administered to the examiners by one another, and printed instructions (see Appendices C, D, and G) were given for their administration at the schools. Special care was given in the instructions for administering the children's test so that the examiners would be sure that

the children were on the right question, that they would mark their intended answer, and that, as far as the examiners could tell, the children understood each question. The examiners were instructed to discourage the children from copying or answering out loud.

The tests were duplicated for the adults (see Appendices C and E) and answer sheets were provided. The examiners took turns reading the items aloud to the adults, who were instructed to select the answers closest to their own points of view. They were also asked demographic questions (see Appendix F) at the completion of the tests.

The adults were usually tested at the meeting held to explain the study, with the children usually tested the next day during school hours or at least the same week, usually with a ratio of one examiner to four children and not more than five.

The children were provided an answer sheet (see Appendix D) with Yes and No printed in large letters. Each question was illustrated by a cartoon drawing accompanied by the words of the question, both of which were projected on a screen by an opaque projector. The adult reading the question reviewed the meaning of Yes and No, and the adults working with the children made sure they knew how to circle the Yes and the No on their answer sheets. To the fullest extent possible the examiners made sure that the children

understood the questions and were able to express their answers on the answer sheet. After about half the questions were read, the children were given a break and played the game "Birds Fly" and were given an opportunity to go to the restroom. After having some animal crackers and a cup of orange juice the children returned to their tables and completed the questions.

The examiners did the testing of the adults and children at the seven schools during the month of February, 1978. The researcher and one of the examiners did make-up testing at the schools and in homes during the month of March, 1978, to complete tests of parents who had come late to the meetings and to complete the children's test with children who had been absent from school on the day when the examiners came.

#### The Instruments

Two of the instruments used in the present study were locus of control scales, the Adult Nowicki-Strickland Internal-External scale (ANS-IE) (Appendix C) and the Pre-School and Primary Nowicki-Strickland Internal-External scale (PPNS-IE) (Appendix D). The third was a scale for measuring parental attitudes toward child-rearing, the Maryland Parent Attitude Survey (MPAS) (Appendix E).

Because both locus of control scales used in the study are closely related to their parent scale, the Children's Nowicki-Strickland Internal-External scale (CNS-IE; Nowicki

& Strickland, 1973), with many of the test items in the two later scales drawn from the original scale, it was felt that a description of the CNS-IE was needed to help establish the validity and reliability of the ANS-IE and the PPNS-IE.

The Children's Nowicki-Strickland Internal-External scale (CNS-IE)

Test construction, validation, and reliability estimation. Nowicki and Strickland developed the CNS-IE based on Rotter's (1966) definition of locus of control. Test items were intended to "describe reinforcement situations across interpersonal and motivational areas such as affiliation, achievement, and dependency" (p. 149). School teachers were consulted in the construction of the items. The authors sought to make the test readable by fifth graders, yet appropriate for older students as well.

Nine clinical psychologists were provided the Rotter (1966) definition of locus of control of reinforcement and were asked to answer the items on the original 102-item scale in an external direction. After items not unanimously selected were dropped, 59 items remained. The form with these items was administered to a sample of 52 children from grades three through nine. With higher scores indicating an external orientation, test means ranged from 19.1 for third grade ( $SD=3.86$ ) to 11.65 for ninth grade ( $SD=4.26$ ). With IQ controlled the students were given an (unspecified)

achievement test, with internal subjects scoring significantly higher ( $t=3.78$ ,  $df=48$ ) (p. 151).

Test-retest reliabilities for a six-week period were .67 for a group aged 8-11 ( $N=98$ ) and .75 for those aged 12-15 ( $N=54$ ).

A more homogeneous scale was derived through analysis of the items and through examination of their discriminative ability. The results of these analyses, along with comments of students tested and suggestions of teachers, led to the final 40-item scale.

A predominantly white sample of 1,017 children and youth from grades three through twelve living near a large southern city school system was selected to complete the 40-item form for reliability estimates, demographic information, and indications of construct validity. School records interpreted with the Hollingshead (1957) Index of Social Position showed lower occupational levels overrepresented and the highest one not represented but all other levels well represented. Otis-Lennon intelligence tests for third through tenth graders had means ranging from 101 to 106 with no significant differences across age groups. The CNS-IE was administered at the school in the spring quarter of 1969 with an oral presentation by the examiner in which each item was read twice.

Means and standard deviations for each age level were presented by Nowicki and Strickland (p. 149) as well as test



items with their biserial item correlations (pp. 150-151). Responses indicated increasing internality with each higher age group. Biserial item correlations were "moderate but consistent" for all age groups (p. 151). An example is item 32, "Do you feel that when good things happen they happen because of hard work?" The answer in the external direction is "No." Item-total relationships for boys were .42 (Grade 3), .32 (Grade 7), and .29 (Grade 11). For girls the biserial item correlations for this item were .20 (Grade 3), .26 (Grade 7), and .25 (Grade 11) (p. 151).

Split-half reliability estimates, corrected by the Spearman-Brown formula, were  $\underline{r}=.63$  (Grades 3, 4, and 5);  $\underline{r}=.68$  (Grades 6, 7, and 8);  $\underline{r}=.74$  (Grades 9, 10, and 11); and  $\underline{r}=.81$  (Grade 12) (p. 151). Nowicki and Strickland considered these levels to be lower than the scale's true internal consistency, since the items were not arranged according to difficulty. The test was additive and the items not comparable (p. 152).

Test-retest reliabilities derived from test administrations six weeks apart were .63 for third graders, .66 for seventh graders, and .71 for tenth graders (p. 152).

Correlates of the CNS-IE scale. When test results from the CNS-IE were correlated with scores on a shorter form of the Children's Social Desirability Scale (Crandall, Crandall, & Katkovsky, 1965). They revealed no significant relationships between the scale and social desirability (p. 152).

Correlations between CNS-IE scores and occupational levels as measured by the Hollingshead Index (1957) were provided showing 6 of the 16 correlations significant at the .10 level or above. The authors tentatively concluded that internality is significantly related to higher occupational level, especially for boys (p. 152).

Nowicki and Strickland's reports of correlations between an (unidentified) achievement test and the CNS-IE scores for boys and girls in Grades 3-7, 10, and 12 showed significant correlations mostly for boys (p. 153).

Correlations of CNS-IE scores and educational levels of parents were inconclusive because the higher education level was used, sometimes the mother's and sometimes the father's, confounding separate interpretations for men and women (p. 152).

In order to test the construct validity of the CNS-IE its authors compared it to other instruments measuring locus of control. Its relation to the Intellectual Achievement Responsibility scale (IAR) was examined with a sample of black third ( $N=182$ ) and seventh graders ( $N=171$ ). Significant correlations were shown with the I+ (responsibility for successes) but not with the I- (responsibility for failures) scores. For third graders  $r=.31$ ,  $p<.01$ ; for seventh graders  $r=.51$ ,  $p<.01$  (p. 153).

The CNS-IE correlated significantly with the Bialer-Cromwell scale (1961) in a sample of 29 white children aged 9-11 ( $r=.41$ ,  $p<.05$ ) (p. 153).

The adult form (ANS-IE), which was derived from the CNS-IE, compared significantly with the Rotter I-E scale (Rotter, 1966) in two studies with college students ( $N=76$ ,  $r=.61$ ,  $p<.01$ ;  $N=46$ ,  $r=.38$ ,  $p<.01$ ) (p. 153).

Further studies. Studies supporting the validity and utility of the CNS-IE include Nowicki (1971) and Nowicki and Roundtree (1971), who found significant relationships between internal locus of control and higher grade point averages but not between internality and intelligence for twelfth graders and college students; and Roberts (1971), who found significant correlations between internality and reading achievement for boys and girls in the seventh grade and a significant relationship between internal locus of control and mathematics achievement for boys in the seventh grade but not for girls. For third graders no significant relationships between locus of control and achievement tests were obtained, but there were significant correlations between internal scores and self-esteem for boys and girls as measured by the Coopersmith (1968) instrument (p. 153).

Ludwigsen and Rollins, (1971) working with white sixth graders, correlated internality as measured by the CNS-IE with success on a visual recognition task and with better performance by a self-initiated cue group than for a group to whom verbal cues were supplied (p. 153). They also found subjects of low socioeconomic status to score more externally than those of a higher socioeconomic class.

Strickland (1971) correlated internality on the CNS-IE with delay of gratification for white elementary school children. Internality was also related to twelfth-grade girls' involvement in extracurricular activities and with votes for class president for elementary and secondary school boys (Nowicki, 1971; Nowicki and Barnes, 1973; Nowicki and Roundtree, 1971). A study by Duke and Nowicki (1972) suggested that externality as measured by the CNS-IE with white children may be related to prejudice against black children.

Nowicki and Barnes (1973) sought to modify in an internal direction the locus of control orientation of 291 predominantly black subjects from inner city ghettos during a series of eight one-week summer camp experiences. The camp counselors made explicit the connection between campers' efforts and subsequent rewards. Significant differences between pretest and posttest scores on the CNS-IE were obtained for most of the campers.

The Adult Nowicki-Strickland Internal-External scale (ANS-IE)

Test construction, validation, and reliability estimation. The ANS-IE scale developed from the CNS-IE. The new scale was revised and adopted for use by college and noncollege adults by the changing of the word "kids" to "people" and by the deletion of items about parents. This was done to allow close comparison of the responses of children and adults with instruments similar not only in form but in theoretical background. It was also felt by the authors of the ANS-IE (Nowicki & Duke, 1974a) that a new adult scale was needed to overcome weaknesses in the Rotter (1966) Internal-External scale (I-E). Twelve studies with more than 766 subjects were conducted by Nowicki and his associates in order to test whether they had devised scales which maintained the strengths of the Rotter scale while overcoming what they considered its weaknesses. The items of the ANS-IE were based on Rotter's (1966) definition of locus of control and were designed to be answered Yes or No.

From a study of three college groups Nowicki and Duke provided correlations of individual items and total scores. Also calculated were the percentages of subjects scoring in an internal direction. On the basis of these measures Nowicki and Duke considered the ANS-IE to be "moderately homogeneous" (1974a).

To establish the internal consistency of the ANS-IE the authors reported split-half reliabilities ranging from .74

to .86. They also claimed that these correlations underestimated the true internal consistency reliability because the items were not arranged according to difficulty. For one of the three college groups ( $N=48$ ) test-retest reliability for a six-week period was  $r=.83$  (p. 4).

When means and standard deviations from a previous sample of young people in grades nine through twelve using the CNS-IE were compared with those of college and community adult groups using the ANS-IE, the scores indicated a trend toward increasing internality with increasing age with both scales (p. 4).

To test the discriminant validity of the ANS-IE in relation to social desirability two of the college groups ( $N=48$  and  $N=68$ ) which had been used to gather reliability information were also given the Marlowe-Crowne Social Desirability Scale. Correlations with ANS-IE scores were  $r=.10$  for the first group and  $r=.06$  with the second, confirming earlier findings of Nowicki and Strickland (1973) of relative freedom of the ANS-IE from social desirability influence.

To test the ability of the ANS-IE to discriminate between locus of control and intelligence, one of the three samples of college students taking the ANS-IE earlier to provide psychometric data was administered the Scholastic Aptitude Test (SAT) ( $N=48$ ). The correlation between ANS-IE and SAT scores was  $r=.11$ , results consistent with those

showing the relationship between locus of control and intelligence with the use of the CNS-IE (Nowicki & Strickland, 1972) (p. 4).

Because Rotter and others using his scale have claimed to confirm predictions based on social learning theory (p. 5), Nowicki and Duke (1974a) wanted the ANS-IE to show similarity to the Rotter scale as a suggestion of convergent validity, but not an exact relationship, because they wanted their scale to measure locus of control more accurately. Because they expected their scale to achieve this balance, they hypothesized a positive correlation of the two scales "in the middle range" (p. 5).

In order to test their expectations they administered the Rotter and ANS-IE scales to two college samples ( $N=48$ ) and one sample of community adults ( $N=38$ ) which had been tested earlier to provide psychometric information (p. 5). The correlations were as expected and significant ( $r=.68$ ,  $p<.01$ ;  $r=.48$ ,  $p<.01$ ) (p. 5). The authors interpreted these results as an indication that the ANS-IE measures the same construct as Rotter's I-E but not in an identical manner.

Correlates of the ANS-IE scale. In seeking further construct validation of the ANS-IE the authors reasoned that empirical relationships confirming the construct validation of the Rotter scale should suggest the same for the ANS-IE if it shared a similar relationship with empirical measures (p. 5). To establish this validation,

locus of control studies were carried out relating locus of control to personality correlates, behavior maladjustment, and race.

Personality correlates of locus of control were studied with an untested sample of introductory psychology students ( $N=36$ ). Partially replicating the study of personality correlates of the Rotter scale (Hersch & Scheibe, 1967), Nowicki and Duke asked subjects to complete the ANS-IE and Adjective Check Lists of needs (Gough, 1955). Results obtained were very similar to the correlations of the Rotter scale with the Adjective Check Lists. Twelve of the 16 need scales correlated significantly with the Rotter scale at the .05 level of significance or above, compared to six correlating significantly with the ANS-IE at the .05 level or above (Nowicki & Duke, 1974a, Table 3).

In order to see if the ANS-IE related to behavior maladjustment in the same way as the Rotter scale, the Neuroticism test of Eysenck (p. 6) and the Taylor Manifest Anxiety Scale were given to 36 men and 45 women. Externality as measured by the ANS-IE was positively related to higher neuroticism on the Eysenck scale ( $r=.36$  for men,  $p<.05$ ;  $r=.32$  for women,  $p<.05$ ) and to higher anxiety on the Taylor scale ( $r=.34$  for men,  $p<.10$ ;  $r=.40$  for women,  $p<.05$ ) (p. 6). Previous use of the Rotter I-E had also shown externality related to psychological maladjustment (Rotter, Chance, & Phares, 1972), a prediction of social learning theory (p. 6).



Duke and Mullens (1972) reasoned further from social learning theory that the degree of psychological maladjustment would increase with increases in the degree of externality. They tested this hypothesis by administering the ANS-IE scales to two groups of hospitalized women diagnosed by psychiatrists as psychotic ( $N=20$ ) or neurotic ( $N=20$ ), with a control group of women on the staff ( $N=20$ ) also taking the test. The more deeply disturbed group had a mean of 16.30 (compared to 40 test items); the next group had a mean of 11.95; and the control group had a mean of 9.20, larger scores indicating greater externality. The differences were found at the .01 level of significance. Nowicki and Duke referred to studies by Shybut (1968) and Cromwell, Rosenthal, Shakow, and Zahn (1961) for use of the Rotter scale with similar results.

Another area of investigation turned to by Nowicki and Duke to add to the convergent validity of their adult scale was the race of subjects using the measure. The authors reasoned that the minority status of black subjects was a condition in which reinforcements were in the hands of powerful others, part of Rotter's (1966) definition of an external locus of control (p. 6). Because of this similarity Nowicki and Duke expected black subjects to respond in a more external direction than white subjects, the way they did empirically with children and adults in studies by Lefcourt (1972) and Joe (1972). In order to test this hypothesis middle class black college students were tested with the

ANS-IE (Johnson & Nowicki, 1972), and in another study middle class white college students were administered the ANS-IE ( $N=102$ ) (Duke & Nowicki, 1972). The black subjects scored in a significantly more external direction ( $t=6.32$ ,  $p<.01$ ).

The last tests undertaken to establish convergent validity in the construction of the ANS-IE had to do with achievement as measured by school performance. The positive relationship of internality with greater achievement among children had been more consistent for boys than for girls, Nowicki and Duke pointed out (pp. 6-7) in reference to McGhee and Crandall (1968); Crandall, Katkovsky, and Preston (1962); Crandall, Crandall, and Katkovsky (1965); and Nowicki and Strickland (1973). Without being sure what the relationship would be for adults, Nowicki and Duke hypothesized a positive relationship of internality and academic achievement for young adults. To test this hypothesis 22 young men and 26 young women in junior college were administered both the Rotter and ANS-IE scales. Test results were correlated with cumulative grade point averages and scores on the Scholastic Aptitude Test (SAT) previously taken.

Significant positive relationships were obtained only for the young men, with the ANS-IE scales ( $r=-.50$ ,  $p<.02$ ) (Nowicki & Duke, 1974a, Table 4). The only other significant finding was with the ANS-IE and contradicted the hypothesis. It was the relation of externality to achievement for the young women ( $r=.39$ ,  $p<.05$ ). To see if these

relationships would hold true in repeated studies, Nowicki and Duke tested 39 young women in college and 37 young men, all of whom were students in an introductory psychology class. Results again showed internality to be significantly related to achievement for the young men ( $\underline{r} = -.43$ ,  $p < .01$ ) and externality related to achievement for the young women ( $\underline{r} = .63$ ,  $p < .01$ ) (Pappas & Nowicki, 1972).

In a second study to test this relationship Nowicki and Duke (1972) tested college sophomores from an introductory class in psychology and found a similar set of relationships. For young women  $\underline{r} = .42$ ,  $p < .05$ ; for young men  $\underline{r} = -.42$ ,  $p < .05$ .

The authors thought, with Horner (1972) that those unexpected results might be due to fear of success of women who might be internal in behavior but who pursued an external role in order not to threaten men and thus lose popularity with them, in acquiescence to more traditional, passive cultural concepts of female roles.

Nowicki and Duke suggested that the ANS-IE had some limitations when related to achievement behavior of women, saying that models more complex than their studies of achievement and locus of control may be needed to determine those relationships (1974a).

The Pre-School and Primary Nowicki-Strickland Internal-External scale (PPNS-IE)

Test construction, validation, and reliability estimation. In order to make studies among age groups more comparable, Nowicki and Duke (1974b) constructed a locus of control scale for children of preschool and primary age similar to the ones which they and their associates had already constructed for older children (CNS-IE; Nowicki & Strickland, 1973) and for adults (ANS-IE; Nowicki & Duke, 1974a).

Using Cronbach and Meehl's (1955) construct validation procedures as a guide, Nowicki and Duke sought to develop a scale with the following eight characteristics:

1. Suitability of the scale for group administration, to make data-gathering more efficient.
2. An interesting format that would hold the attention of young children and thus provide higher reliability estimates.
3. Item means between .3 and .7 and moderate item-total correlations, in order to maximize the test's discriminative ability.
4. Internal scores increasing with age, based on the assumption of increased internal control with maturity.
5. A lack of relationship between scores on the measure and social desirability scores.

6. Significant relationships with the CNS-IE, for indications of comparability with this parent measure.
7. A factor structure similar to that of the CNS-IE.
8. A relationship to variables related to locus of control similar to its predecessors, the CNS-IE and the ANS-IE (p. 875).

Test items were based on Rotter's definition of locus of control (1966). Two psychologists with Ph.D.'s and two teachers of preschool children contributed items, and many of the CNS-IE items were included in this pooling process. The questions were made short and answerable with a Yes or a No choice to make them easier.

The resulting list of 78 items was given to five psychology staff members who held Ph.D. degrees and five graduate students in psychology, along with Rotter's definition of locus of control. After these raters answered items in an external direction, only unanimously selected questions were maintained (p. 875).

The resulting 44-item list was used in a pilot study by Wilson, Duke, and Nowicki (1972) with 36 boys and 44 girls who were white preschool children from a private school in a large southern metropolitan area. Socioeconomic levels represented were mostly middle to upper levels by the Hollingshead (1957) index. Test administration was oral with examiners marking the responses of the subjects, who

were instructed to answer in either direction, assured that the answers would not be marked right or wrong.

This study was done primarily to determine which items had means in the .3 to .7 range and moderate item-total correlations. An item analysis was also performed on the 10 highest and 10 lowest scores. On the basis of these results 36 of the 44 items were kept, and their stability was cross-validated in a comparable study of preschool children ( $N=21$ ). Items acceptable in both groups numbered 26, comprising the preliminary form of the new test, the Pre-School and Primary Nowicki-Strickland Internal-External control scale (PPNS-IE; p. 876). Fourteen of these items were CNS-IE questions, and six were slightly altered CNS-IE items.

Items on the PPNS-IE were arranged so that a subject answering the items externally would give no more than three Yes or No answers in sequence. When answered in an external direction, 13 items would be answered "Yes" and 13 "No." The total score was the number of external answers chosen.

Eight questions from Crandall's scale (Crandall, Crandall, & Katkovsky, 1965) were interspersed among the locus of control items to disguise their intent and to measure the effects of social desirability. The questions were given in a cartoon format in order to help meet requirements 1 and 2 sought by the authors (p. 876).

A study was held for further validation of the items and to assess the value of the cartoon format (p. 876).

Subjects were randomly selected from two schools near a southern metropolitan school system. All socioeconomic levels except the highest were represented in the sample of 240 white children divided evenly between boys and girls. Subjects scoring below an IQ of 80 were not included in the study.

The children were divided into same-sex groups of 10 and given examples of how to respond to the questions. The examiner checked to see that the children were following instructions. The CNS-IE scale was also administered to eight-year-old children.

A second testing session was held six weeks after the first session to retest seven-year-olds with the PPNS-IE for test-retest reliability information. The Comfortable Interpersonal Distance scale (Duke & Nowicki, 1972) was also given to help validate the locus of control scale.

School records were used for information on achievement gathered from use of the Iowa Basic Skills Test. School records interpreted according to Hollingshead (1957) provided information on the socioeconomic status of each child (p. 876).

These studies were conducted primarily to evaluate the consistency of items and total test scores and to evaluate the construct validity of the total scores. Most of the item means did range between .3 and .7, and most did have item-total correlations in the moderate range, as sought by the authors (pp. 876-877).

Nowicki and Duke provided means and standard deviations for groups of boy and girl five-and-six and seven-and-eight-year-olds, showing that the means did become more internal with age, the authors' fourth requirement for the scale (p. 877).

Correlations between PPNS-IE scores and social desirability scores ranged from  $-.08$  to  $.11$  (Median  $r=.03$ ), satisfying the fifth requirement of Nowicki and Duke, the lack of a significant relationship between locus of control and social desirability scores (p. 877).

The sixth requirement for the scale was met by the finding of significant correlations between the PPNS-IE and the CNS-IE with the eight-year-old children ( $r=.78$ ,  $N=60$ ,  $p<.001$ ). The retest for seven-year-olds after six weeks showed significant reliability levels ( $r=.79$ ,  $N=60$ ,  $p<.001$ ).

Factor analysis of the PPNS-IE indicated that none of the social desirability items loaded into any of the internal-external factors. The factor structure was similar to that reported by Nowicki (1973) for the CNS-IE. Seven items loaded high on Factor 1 (items 7, 8, 16, 21, 25, 27, and 34), which Nowicki and Duke called a power versus helplessness factor. Eight items loaded high on Factor 2 (5, 6, 9, 12, 17, 22, 26, and 28) and were called a persistence in dealing with parents factor. Six items comprised Factor 3 (1, 3, 4, 10, 11, and 20) and was called a luck factor (pp. 878-879). The factor analysis met the authors' seventh



requirement for the PPNS-IE scale, a factor structure similar to that of the CNS-IE.

Correlates of the PPNS-IE scale. Correlations between the PPNS-IE and achievement as measured by the Iowa Basic Skills test showed a tendency for internality to be related to achievement for boys and indicated a significant relationship for girls. These results gave partial support to Nowicki and Duke's eighth requirement (p. 879). Further help in meeting this requirement was provided by the results of the overall scores on interpersonal distance compared to locus of control scores. Internality showed a significant relation to less distancing ( $\underline{r}=.44$ ,  $\underline{df}=28$  for boys and  $\underline{r}=.33$ ,  $\underline{df}=26$  for girls).

#### The Maryland Parent Attitude Survey (MPAS)

Test construction, validation, and reliability estimation. The Maryland Parent Attitude Survey (MPAS) is a scale for measuring child-rearing attitudes of parents, constructed to control a social desirability response set (Pumroy, 1966, p. 73). In construction of the MPAS, items were gathered from other parent attitude scales and from material on child-rearing. After being reorganized the items were given to a group of 178 subjects, 96 females and 82 males. The group consisted of 55 high school seniors, 60 college students, and 63 parents attending a PTA meeting. The subjects were asked to answer as they thought a "good" parent would,

marking each item "strongly agree," "agree," "disagree," or "strongly disagree" (p. 74). The percentage of people answering items in each of the four categories was tabulated.

A group of nine psychologists familiar with literature on types of parents categorized each item according to the type of parent the item was thought to represent. The five groups arrived at were: Indulgent, indifferent, disciplinarian, rejecting, and protective (see above, pages 4-7).

Items were paired on the basis on their representing separate types of parents and when approximately the same percentage of answers fell within each category of agreement or disagreement when subjects answered as a "good" parent should. With 45 items representing each of the four parental types, 90 pairs of items were formed. The subject was asked to read each pair of items and to select the one that came closer to his or her opinion. The test was scored by counting the number of items selected from each of the four categories (p. 76).

Fifty-four college students, 30 young men and 24 young women, were subjects for a test-retest reliability study with approximately three months between test administrations. The reliabilities of the four scales were: Disciplinarian, .62; Indulgent, .73; Protective, .69; and Rejecting, .65. A split-half reliability test administered to 45 young women in college and 45 young men yielded reliability estimates for the four scales in the .60 to .70 range, except

for a high of .84; the lowest correlation was .67 (pp. 76-77).

Intercorrelations between the scales was computed, although, as Pumroy acknowledged, the measures were inter-related because of the forced-choice format, instead of independent. The correlation between the Disciplinary and Indulgent scales was  $-.69$ ; between the Indulgent and Rejecting scales,  $-.39$ ; and between the Protective and Rejecting scales,  $-.56$  (p. 77).

A sample of 196 men (mean age=23.9,  $SD=5.90$ ) had a mean score (each scale containing 45 pairs of items) of 25.55 on the Disciplinary scale ( $SD=7.10$ ) compared to a sample of 187 women (mean age=25.28,  $SD=8.63$ ) who scored 23.96 on the same scale ( $SD=6.35$ ). The same group of men scored a mean of 20.52 on the Indulgent scale ( $SD=6.78$ ) with the women scoring 23.05 ( $SD=6.60$ ). On the Protective scale the men scored 24.24 ( $SD=6.53$ ), whereas the women scored 23.99 ( $SD=4.90$ ). Men scored a mean of 18.50 ( $SD=5.91$ ) on the Rejecting scale, close to the women's score of 18.59 ( $SD=6.04$ ).

Correlates of the MPAS. Correlations ranging from  $-.17$  to  $.19$  between the MPAS and the Edwards Social Desirability Scale from the MMPI were reported by Pumroy (p. 77).

One study using the MPAS touched on the construct validity of its scales. Brody (1964) related mothers' MPAS

scores to their ratings of their interaction with their children as indicated on the Parental Attitude Research Instrument (PARI; Schaefer & Bell, 1958). Brody found that mothers scoring high on the Disciplinarian scale showed more directing and restricting behavior than those who scored low. Also those mothers who scored high on the Rejecting scale rated themselves high on forbidding behavior with their children when they filled out the PARI.

One other study has been involved with the construct validity of the MPAS. Tolor (1967) evaluated the MPAS to confirm its freedom from social desirability influences, to test the intercorrelation between scales, and to test the validity of the MPAS by comparing it to a personality dimension which Tolor considered closely related to parental attitudes, locus of control (p. 69). Tolor hypothesized significant and negative correlations between Disciplinarian and Rejecting attitudes and positive correlations between Indulgent and Protective attitudes (p. 71).

In order to replicate Pumroy's study Tolor followed the test author's procedure of calculating intercorrelations among the scales although they were not independent. According to his figures Disciplinarian parental attitudes correlated significantly and negatively with Indulgent attitudes, as did Protective attitudes with Rejecting attitudes (pp. 71-72), the same relationships obtained by Pumroy (1966, p. 73).

Because Indulgent and Protective attitudes were not positively correlated, Tolor thought that one or both of these scales might need to be redefined (p. 72).

Tolor hypothesized a positive correlation between an Indulgent attitude and externality on the Rotter I-E scale (1966) and a negative correlation between a Disciplinary attitude and externality as measured by the same scale (p. 71). Neither of the two hypotheses was supported, the only significant correlation being a negative one with the first sample ( $N=22$ ) between an Indulgent attitude and externality (p. 73). Because this finding was not repeated in the second study, Tolor dismissed it as "a chance relationship to which little significance should be attributed" (p. 73).

Instead of this unexpected outcome indicating a lack of validity for the MPAS or an inadequate methodology on the researcher's part, as Tolor suggested (pp. 73-74), Tolor's difficulty in finding significant correlations between the I-E and the scales of the MPAS might lie in his interpretation of Pumroy's definitions of the scales. He hypothesized a positive correlation between an Indulgent attitude and externality because that definition described situations that seemed to him conducive to the development of an external attitude, such as the child's not being encouraged to show initiative or to have responsibilities around the house (p. 71) and the child's being rewarded by treats without exerting his or her own efforts (p. 73). While Tolor's view

that these conditions would tend to foster externality seem consistent with social learning theory (Rotter, Chance, & Phares, 1972), there are other aspects of Pumroy's definition of an Indulgent attitude that might outweigh those influences.

The child's being allowed to have his or her own way could suggest to the child that he or she is not being externally controlled, as could the circumventing of rules by the child. Studies such as that by Schneewind (1975) suggest that permissiveness, which seems similar to Pumroy's Indulgent definition (1966, pp. 74-75) and to many of the test items keyed for the Indulgent attitude (see Appendix D), might correlate positively with internality, so the Indulgent attitude might be expected to do the same.

Tolor expected a Disciplinary attitude to correlate negatively with externality because he interpreted Pumroy's definition of Disciplinary to mean that "success or failure is determined by one's own actions or characteristics" (Tolor, 1967, p. 71). However, the imposition of rigid control upon the child by the Disciplinary parent, as suggested by both the definition of Disciplinary (Pumroy, 1966, p. 75) and by the test items for that attitude (see Appendix E), seem to the present researcher to be very close to Rotter's definition of externality, the perception that reinforcement is "under the control of powerful others" (Rotter, 1966, p. 1).

Tolor may have obtained no significant results from his studies because he may have reversed the definitions of externality as they pertained to Pumroy's descriptions of Indulgent and Disciplinary parental attitudes. If this is what happened, the one significant correlation that was found by Tolor may have been due not to chance, as he suggested, but due instead to an actual correlation of an Indulgent attitude with internality.

This interpretation of Tolor's results could lend support to the construct validity of the Indulgent scale of the MPAS. Data concerning the construct validity of the Protective scale as well as further studies supporting the validity of all the scales would be helpful, but none are available (Pumroy, 1977). Still, it can be a useful instrument because of the validity and reliability information which it does provide compared with that available with other scales; because it taps four basic attitudes of interest to this researcher, whereas some scales are more limited in scope; because it seems to have adequate control of social desirability influences; because its wording is more up-to-date than that of the Shoben (1949) scale; and because, unlike the Parental Attitude Research Instrument (Schaefer & Bell, 1958), it is worded for use by both mothers and fathers.

### Analysis of Data

After the above instruments were used to test the hypotheses listed in Chapter I (pages 5-7 above), test results were computed on programs of the Statistical Package for the Social Sciences (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975). Hypotheses One through Nine were tested by correlations using Pearson's formula. Hypotheses Ten, Eleven, and Twelve were tested by t tests of differences in means. All the hypotheses were tested at the .05 level of significance. The test results will be discussed in Chapter IV. Discussion, conclusions, and implications concerning the results will be covered in Chapter V.

### Limitations

As a correlational study, the present study reports estimates of levels of association of certain variables with other variables and does not imply causation by reporting that there is a correlation.

The results of the present study are most generalizable to populations similar to the sample studied. Inferences should be tentative and flexible, leaving room for the results to be reinterpreted, modified, challenged, or strengthened in the light of further study.

In the development of the instruments used in the present study random sampling is referred to only once, for the development of the PPNS-IE (Nowicki & Duke, 1974b, p. 876), after the test had reached its final form. Because of



this, especially in the case of small numbers of subjects, as in the Tolor (1967) study, the subjects and their scores may not be representative of others to whom they might be compared in future studies. Also both samples in the Tolor study had a wide disparity of numbers of male and female subjects, and scores of males and females were not reported separately.

In the development of the ANS-IE introductory psychology classes were usually the sample groups (Nowicki & Duke, 1974a, pp. 3-5, 8). They may have had characteristics not shared by the sample of parents in the present study. Also it appears that the authors were known by the subjects in the psychology classes, this acquaintance being a possible source of social desirability influence on test responses.

Caution should be exercised in the comparison of the results of the present study with the results of studies in which the instruments used were developed. The sample of adults for the present study is expected to be older than the subjects used in developing the MPAS (Pumroy, 1966, p. 76), and little else is revealed about that sample with which to compare the sample tested in the present study.

The scales of the MPAS are not independent, as acknowledged by the author (Pumroy, p. 77), who also cautions that the instrument is for research use and is not a clinical tool (p. 74). A greater weakness of the MPAS is the lack of further validity data for each of its four scales.

Because of these validity and reliability uncertainties, inferences based upon scores from the MPAS should be guarded and tentative.

The major criticism of the Rotter scale raised by Nowicki and Duke (1974a) and several studies to which they referred (p. 2) is the social desirability response set with the use of the I-E, a weakness which the ANS-IE was constructed to overcome. In one instance the ANS-IE may not have been successful in overcoming the tendency of respondents to answer in a socially acceptable fashion. That was the unexpected correlation of externality with achievement among female subjects in their study and in studies by Pappas and Nowicki (1972) and by Nowicki and Duke (1972). Nowicki and Duke concluded that "externality may be a more culturally approved role for females than for males . . ." (p. 3). The authors recognized the limitation of the ANS-IE for predictions of academic achievement among women (pp. 7-8), but they did not speak of these results as an indication of the apparent vulnerability of their instrument to social desirability influences among populations like the ones tested (pp. 7-8).

The ethnic status of subjects is a unique characteristic of sample groups which can make their results not as applicable to other groups. The study of Nowicki and Duke (1974a, pp. 3-5, 8) for construction of the ANS-IE employed white subjects except in the case of a specific study of

ethnic minority subjects (p. 6). Further studies with samples of ethnic minority subjects and with mixed racial groups need to be made in order for the ANS-IE to be more applicable to these groups.

In administration of the PPNS-IE, even with a ratio of adults to children more conservative than the one used for the development of the test, the examiners could not be positive that the children always understood every question. When they answered aloud, they indicated that sometimes they definitely understood and other times that they definitely did not. In answer to question 19 of the PPNS-IE (see Appendix D), "Should your Mommy and Daddy decide what you should do?" one girl spoke out her understanding reply, "No, because I have a brain of my own." In reply to question 16, "Most of the time do you find it easy to get your own way at home?" a boy who did not understand the intent of the question answered, "Sure--I get home on my own--I ride my bicycle." Another question misunderstood by one boy was number 17, "Are most kids just born good at running races?" He replied after the test, "The easiest question was, 'Can a baby run a race?' Of course not!" The use of figures of speech, abstract thought, and involved wording seemed to be an obstacle to some of the children in the present study. Also there seemed to be a difficulty on the part of some in using the Yes or No answers as symbols of their attitudes rather than as objects on a paper, which some of the children answered in an alternating or same choice pattern.

CHAPTER IV  
RESULTS OF THE STUDY

Basic Information

Basic information about the present study involving 105 kindergarten children and 105 parents, usually mothers, is listed in Table 1, page 81. The kindergarten children who were administered the Pre-School and Primary Nowicki-Strickland Internal-External Scale (PPNS-IE) averaged 68 months in age, or five years and eight months, with a standard deviation of 3.9 months. Their scores on the PPNS-IE had a mean of 12.6 external choices out of a possible 26, with a standard deviation of 2.4 external answers.

The parents of these kindergarten children who took the adult locus of control scale, the Adult Nowicki-Strickland Internal-External Scale (ANS-IE), had a mean of 10.7 external scores out of a possible 40 external choices with a standard deviation of 4.4. The adult standard deviation for their locus of control test was about 11 percent of their possible external answers, whereas the children's standard deviation for their locus of control test was about 8 percent of their possible external choices.

Table 1

## Test Score Means and Standard Deviations

Test	Mean of External Scores	Range of Answers	Standard Deviation
Adult Nowicki-Strickland Internal- External Scale (ANS-IE)	10.69	0-40	4.43
Pre-School and Primary Nowicki- Strickland Internal-External Scale (PPNS-IE)	12.56	0-26	2.41
Maryland Parent Attitude Survey: (MPAS)			
Disciplinarian Scale	25.30	0-45	5.18
Indulgent Scale	20.11	0-45	6.14
Protective Scale	26.89	0-45	5.04
Rejecting Scale	16.40	0-45	5.83

Number of Cases = 210 (105 children; 105 adults)

These parents were also administered the Maryland Parent Attitude Survey (MPAS), which is comprised of four scales, Disciplinary, Indulgent, Protective, and Rejecting, each scale with a possible 45 responses. The parents made the most choices of attitude statements categorized as belonging to the Protective scale, an average of 26.9 choices with a standard deviation of 5.0. Nearly the same level of choices was registered on the Disciplinary scale, which had a mean of 25.3 selections with a standard deviation of 5.2. The scale receiving the third highest frequency of responses was the Indulgent scale, which had a mean of 20.1 statements chosen in its category with a standard deviation of 6.1. The least frequently chosen group of statements on the MPAS was that representing Rejecting parental attitudes with a mean of 16.4 and a standard deviation of 5.8.

One factor in the present study consistent with all the studies reviewed was the apparent increase of internal-ity of locus of control with increasing age. Parents and children were administered tests that were not exact but similar. Nearly one-half the children's sample selected external answers. The adult sample selected only one-fourth the possible external answers, suggesting the growth of more internal attitudes with age.

### Hypothesis Testing

The information which tests the 12 hypotheses listed on pages 7 through 9 above and which will be stated below is provided in Tables 2 through 4, pages 84 through 86. Table 2 refers to Hypotheses One through Nine; Table 3 applies to Hypothesis Ten; Table 4 provides information for Hypothesis Eleven; and Table 5 lists data for Hypothesis Twelve. As the information provided in the tables indicates, the results of the data collection cause the researcher not to reject the Null hypothesis for any of the 12 hypotheses. The significant correlations shown in Table 2 occur only among the scales of the Maryland Parent Attitude Survey.

Hypothesis One states: There is no relationship between the locus of control of parents and their disciplinarian attitudes toward child-rearing. The information testing this hypothesis is found in Table 2, page 84, number 1, where scores on the ANS-IE are correlated with scores on the Disciplinary scale of the MPAS. Because of the low, nonsignificant correlation of these two groups of scores the Null hypothesis is not rejected.

Hypothesis Two states: There is no relationship between the locus of control of parents and their indulgent attitudes toward child-rearing. The data testing this hypothesis is found beside the number 2 in Table 2, where scores on the ANS-IE are correlated with scores on the Indulgent scale of the MPAS. Because of the low,

Table 2

Interrelationships Among Scores from Internal-External  
Scales and Parent Attitude Survey

Hypothesis Number	Adult Nowicki-Strickland Internal-External Scale	Hypothesis Number	Pre-School and Primary Nowicki-Strickland Scale	Maryland Parent Attitude Survey: Disciplinary Scale	Indulgent Scale	Protective Scale
1.	$\bar{r}=0.18$	6.	$\bar{r}=0.00$			
2.	$\bar{r}=-0.13$	7.	$\bar{r}=0.11$	$\bar{r}=-0.43^{**}$		
3.	$\bar{r}=-0.03$	8.	$\bar{r}=0.12$	$\bar{r}=0.29^{*}$	$\bar{r}=0.20^{*}$	
4.	$\bar{r}=0.09$	9.	$\bar{r}=0.13$	$\bar{r}=0.07$	$\bar{r}=0.51^{**}$	$\bar{r}=-0.45^{**}$
5.	$\bar{r}=0.17$					
Pre-School and Primary Nowicki-Strickland Scale						
Number of Cases = 210 (105 children; 105 adults)						

$r$  = Correlation Coefficient

The acceptable level of significance for the study is  $p < .05$ .

\* $p < .05$  or better

\*\* $p < .01$  or better



Table 3  
 Comparison of Children's Locus of Control Scores  
 for Ethnic Majority and Minority Groups  
 for Hypothesis Ten

Group	Number of Cases	Mean	Standard Deviation	Standard Error	df	<u>t</u> value
Ethnic Majority (White)	71	12.62	2.72	0.32	98.61	0.42
Ethnic Minority (Black)	34	12.44	1.60	0.27		

\*p<.05 or better

Table 4  
 Comparison of Children's Locus of Control Scores  
 for Higher and Lower Economic Groups  
 for Hypothesis Eleven

Group	Number of Cases	Mean	Standard Deviation	Standard Error	df	<u>t</u> value
Higher Economic Status	50	12.50	2.38	0.34	103	-0.25
Lower Economic Status	55	12.62	2.46	0.33		

\* $p < .05$  or better

Table 5  
 Comparison of Children's Locus of Control Scores  
 for Higher and Lower Educational Status  
 for Hypothesis Twelve

Group	Number of Cases	Mean	Standard Deviation	Standard Error	df	t value
Higher Educational Status	77	12.55	2.43	0.28	102	0.05
Lower Educational Status	27	12.52	2.41	0.47		

\* $p < .05$  or better

nonsignificant correlation of these two groups of scores the Null hypothesis is not rejected for Hypothesis Two.

Hypothesis Three states: There is no relationship between the locus of control of parents and their protective attitudes toward child-rearing. The correlation and significance level for the testing of this hypothesis are found beside the number 3 in Table 2, where ANS-IE scores are related to the Protective scale of the MPAS. Because of the nonsignificant correlation the Null hypothesis is not rejected for Hypothesis Three.

Hypothesis Four states: There is no relationship between the locus of control of parents and their rejecting attitudes toward child-rearing. Beside the number 4 are the figures showing the correlation of the ANS-IE with the Rejecting scale of the MPAS and their significance level. The nonsignificant correlation causes the researcher not to reject the Null hypothesis for Hypothesis Four.

Hypothesis Five states: There is no relationship between the locus of control of parents and the locus of control of their children. This comparison is represented at the top of the first column of Table 2 beside the number 5, where adult and children's locus of control scores are compared. Because the correlation is not significant, the Null hypothesis is not rejected for Hypothesis Five.

Hypothesis Six states: There is no relationship between the disciplinarian attitudes of parents and the locus of

control of their children. The figures beside number 6 in the second column of Table 2 compare children's locus of control scores on the PPNS-IE with parents' Disciplinary attitude scores. Because of the nonsignificant correlation the Null hypothesis is not rejected for Hypothesis Six.

Hypothesis Seven states: There is no relationship between the indulgent attitudes of parents and the locus of control of their children. In the second column of Table 2 beside the number 7 are found the correlations and significance levels for the comparison of groups of scores on the PPNS-IE with the Indulgent parent attitude scale scores. Because of the nonsignificant correlation the Null hypothesis is not rejected for Hypothesis Seven.

Hypothesis Eight states: There is no relationship between the protective attitudes of parents and the locus of control of their children. Beside number 8 in the table are the correlations of PPNS-IE scores and Protective parent attitude scale scores. The correlation is not significant, so the Null hypothesis is not rejected for Hypothesis Eight.

Hypothesis Nine states: There is no relationship between the rejecting attitudes of parents and the locus of control of their children. For this hypothesis the scores of the children on the PPNS-IE were correlated with those of the parents on the Rejecting scale of the MPAS, as indicated by the correlation at number 9. The Null hypothesis is not rejected because the correlation is not significant for Hypothesis Nine.

Hypothesis Ten states: There is no difference in locus of control scores between children from the ethnic majority group and children from the ethnic minority group. The means testing this hypothesis are found in Table 3, page 85. There is not a significant difference in the means of the locus of control scores for children of the ethnic majority and ethnic minority groups, so the Null hypothesis is not rejected for Hypothesis Ten.

Hypothesis Eleven states: There is no difference in locus of control scores between children from families of higher economic status and children from families of lower economic status. The t-test of means for this hypothesis is represented in Table 4, page 86. When means of the score belonging to children from families of higher economic status are compared with those of children from families of lower economic status, a nonsignificant t value results. Because of this finding the Null hypothesis is not rejected for Hypothesis Eleven.

Hypothesis Twelve states: There is no difference in locus of control scores between children whose parents are more highly educated and children whose parents are less highly educated. The data for testing this hypothesis are found in Table 5, page 87. Means of children's scores from children of more highly educated parents are compared with the scores from children of less highly educated families, with a resulting nonsignificant t value. For this reason

the Null hypothesis is not rejected for Hypothesis Twelve,  
the last hypothesis.

## CHAPTER V

### SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

#### Summary

Locus of control is defined within social learning theory as an individual difference in perception of whether one's reinforcements are controlled by oneself or from outside oneself. Locus of control is described both as a general outlook for most situations based on previous experience and as a specific expectancy of reinforcement in individual situations.

The relevance of locus of control research is suggested by reference to studies in which locus of control is significantly related to age, mental health, achievement, educational background, economic status, and race.

Few studies sought to discover how locus of control is formed, information which would seem to be necessary in order to modify one's locus of control for possible benefit in situations such as the growth of personal identity, the facilitation of the counseling experience, and the increase of school achievement.

Studies which did seek to understand influences upon the development of locus of control emphasize parental attitudes and behavior. The literature generally suggests



that children who perceived their parents as accepting, affectionate, and undemanding saw themselves as having more internal control than children who saw their parents as demanding, aloof, or rejecting.

The purpose of the present study is to seek a clearer understanding of locus of control origins by looking at this perception in kindergarten children as it might relate to attitudes of their parents. It was thought that kindergarten children would be young enough to show continuing development of locus of control and old enough to use an instrument designed to measure preschool children's locus of control. The parental attitudes thought to relate to children's locus of control were the parents' locus of control and some of their attitudes toward child-rearing.

Twelve hypotheses were formulated expressing the concerns of the study. Eight of the hypotheses sought a high correlation between child-rearing attitudes of parents and their locus of control or that of their kindergarten children. One hypothesis looked for a significant correlation between parents' and children's locus of control. Three hypotheses expressed the expectation of a significant relationship between children's locus of control and their parents' educational background, economic status, and ethnic grouping.

The instrument selected to measure parents' locus of control was the Adult Nowicki-Strickland Internal-External scale (ANS-IE) (Nowicki & Duke, 1974a). The test chosen to measure child-rearing attitudes of parents was the

Maryland Parent Attitude Survey (MPAS) (Pumroy, 1966), which was comprised of Disciplinary, Indulgent, Protective, and Rejecting parent attitude scales. The instrument used to measure the kindergarten children's locus of control was the Pre-School and Primary Nowicki-Strickland Internal-External scale (PPNS-IE) Nowicki & Duke, 1974b).

A sample of 105 rural kindergarten children and one parent or guardian of each child was selected for the study. The parent or guardian participating was the one who spent more time with the child than his or her mate or an equivalent amount of time during the previous year.

The researcher trained 11 college graduates to administer the tests to the adults and children. In one-session meetings at the schools the examiners read the questions aloud to the adults, who circled their answers with pencils. At a different meeting at the school one examiner read the questions to the children, who marked their answers with pencils, assisted by examiners helping them in groups of four or five. Makeup calls were made at school by the researcher and one of his trained examiners to test children who had been absent from school during the group testing. Makeup visits were made to schools and homes to test adults who had not completed their tests.

Test results were computed on programs of the Statistical Package for the Social Sciences (Nie, Hull, Jenkins, Steinbrenner,

& Bent, 1975). Hypotheses dealing with relationships of children's locus of control and parents' locus of control or child-rearing attitudes were tested by correlations using Pearson's formula. Hypotheses comparing children's locus of control scores with their socioeconomic status and race were tested by t tests of differences in means. The  $<.05$  level of significance was the criterion used for acceptance or rejection of the Null hypothesis. None of the relationships for the twelve hypotheses was found to be statistically significant.

#### Comments on Specific Hypotheses in Relation to Earlier Studies

The researcher expected to find a relationship between Disciplinary attitudes of parents and their locus of control (Hypothesis One, page 83) and that of their children (Hypothesis Six, pages 88-89) because the Disciplinary parental attitude as defined by Pumroy (1966) (See p. 4 above) seemed so close to part of Rotter's (1966) definition of an external locus of control. That part of the definition spoke of externality as the perception of being " . . . under the control of powerful others . . ." (1966, p. 1).

Also findings of several earlier studies suggested to the researcher a relationship between Disciplinary parental attitudes and the locus of control of parents and children. Katkovsky, Crandall, and Good (1967 found

that in a study using the Intellectual Achievement Responsibility questionnaire daughters' internal scores relating to successes (I+) were negatively associated with their mothers' ratings of coerciveness and punitiveness, characteristics that seem included in Pumroy's (1966) definition of a Disciplinary attitude (see above, p. 4). In a second study (1967) mothers' dominating and controlling, which also seem covered by Pumroy's Disciplinary definition, were negatively associated with their daughters' perceptions of internality.

In Loeb's (1975) study of fourth- and fifth-grade boys, highly directive parents, which seem to fit a major part of Pumroy's Disciplinary definition (see above, p. 4), more frequently had external sons, whereas less directive parents more frequently had internal sons.

The present researcher stated in Hypotheses Two (page 83) and Seven (page 89) an expected relationship between Indulgent parental attitudes (see above, p. 6) and locus of control because of part of Rotter's (1966) definition of an internal locus of control and because of findings in earlier studies. In Rotter's definition the internal person " . . . perceives that the (reinforced) event is contingent upon his own behavior. . . ." (p. 1)

In several studies a relationship was found between parental characteristics that seemed to fit Pumroy's Indulgent definition and perceptions of internal or external control.

In the first of their two 1967 studies Katkovsky, Crandall, and Good found significant positive correlations between children's (especially sons') internal control scores and observers' ratings of behavior which included babying, approval, and affectionateness.

Chance (1965) found permissiveness of mothers and mothers' flexible expectations, characteristics that seem to be included in Pumroy's (1966) Indulgent definition, significantly related to their sons' but not their daughters' perceptions of internal control according to scores on the Intellectual Achievement Responsibility questionnaire.

In the Schneewind (1975) study parental indulgence was significantly related to internality in the children.

In Hypotheses Three (page 88) and Eight (page 89) a relationship was expected between parents' and children's locus of control scores and Pumroy's (1966) Protective definition (see pp. 6-7 above) because of part of Rotter's (1966) definition of external locus of control and because of the findings of earlier studies. Rotter's definition of an external perception included the phrase, " . . . under the control of powerful others. . . ." (p. 1) That kind of control seems to relate closely to Pumroy's Protective definition (see above, pp. 6-7).

Katkovsky, Crandall, and Good (1967) found significant positive correlations between children's (especially sons') internal control scores and observers' ratings of their mothers' protective behavior.

The expectations expressed in Hypothesis Four (page 88) and Nine (page 89) between Rejecting parental attitudes (see page 7 above) and locus of control were held because of the results of several earlier studies.

In the first study by Katkovsky, Crandall, and Good (1967) daughters' locus of control scores representing responsibility for successes (I+ scores) were related negatively to their mothers' ratings of coerciveness and punitiveness, which seem to be included in Pumroy's (1966) definition of Rejecting attitudes (see page 7 above). In the three authors' second study (1967) rejection by both parents appeared to have a more externalizing effect on daughters than on sons.

In the Davis and Phares (1969) study internal college students remembered their parents as showing less rejection than that recalled by external students.

Shore (1968) found rejection by parents significantly related to external locus of control in children.

Epstein and Komorita (1971) found that ethnic minority children who scored externally on a matching task perceived their parents as using excessively hostile control, the parental hostility seeming to relate closely to Pumroy's (1966) definition of a Rejecting parental attitude (see page 7 above).

Young (1976) related powerlessness, which seems to be included in Rotter's (1966) definition of external locus of control, and abusiveness of parents, which seems close to Pumroy's (1966) definition of Rejecting attitudes (see page 7 above).

The expectation expressed in Hypothesis Five (page 88) was based in part on the belief that children as young as kindergarteners would largely reflect the opinions of their parents. Although the similarity of parents' and children's locus of control was not apparent in the Davis and Phares (1969) study, Shore (1968) found internality in junior high school boys related to internality in their fathers. The more internal the father, the more internal was the son.

In stating expectations in the hypotheses the present researcher stated that a relationship was expected instead of a relationship in a particular direction because the relationships found in earlier studies sometimes went in one direction for one study or a part of it and in another direction for another study or part of a study. A relationship was expected, but one which could go in either direction.

The studies reviewed or mentioned in pages 31-33 usually expressed findings that would lead one to expect the relationships expressed in Hypotheses Ten, Eleven, and Twelve (page 90).

That these relationships were not found may be due to a homogeneous rural as opposed to urban culture, or it may be due to actual betterment of the self-concepts of children from the ethnic minority group and from families of lower economic and educational status, to the extent that test scores represent actual attitudes. If this is the case, the present study is at variance with most of the studies

in which locus of control was not more external among these ethnic and socioeconomic groups.

Children from the ethnic minority group in the present study not only scored on the same level as their Caucasian counterparts but also both ethnic minority and Caucasian children compared favorably with the Caucasian children who were tested for the development of the PPNS-IE (Nowicki & Duke, 1974b, p. 879). Five- and six-year-old boys in that study had scores with a mean of 12.31 and a standard deviation of 2.33, with girls the same age having scores with a mean of 14.31 and a standard deviation of 2.20. In the present study boys and girls combined had scores with a mean of 12.62 and a standard deviation of 2.72 for children of the ethnic majority and scores with a mean of 12.44 and a standard deviation of 1.59 for children of the ethnic minority (see Table 2, page 84). Likewise parents of children in the present study compared favorably with adults tested for the development of the ANS-IE, although other studies reported by Nowicki and Duke (1974a) reported some more internal scores. The community group of 33 Caucasian subjects tested for development of the ANS-IE had scores with a mean of 10.96 and a standard deviation of 5.61 (Table 2). In Table 6 of the same article Nowicki and Duke referred to a study of Johnson (1972) involving 32 men and 36 women of ethnic minority status. The mean for the men's scores was 14.16 with a standard deviation of 5.46. The women's mean was 13.88 with a standard



deviation of 6.11. Nowicki and Duke also listed in Table 6 results of their 1972 study with 53 men and 51 women of ethnic minority status. The mean for the men's group was 15.11 with a standard deviation of 6.01; for the women the mean was 14.89 with a standard deviation of 5.83. In the present study the scores of the ethnic groups were combined for adults, who had a mean of 10.68 with a standard deviation of 4.43 (see Table 1, page 81).

### Discussion

If the conditions limiting the results of the present study (See Limitations above on pages 76-79) were not too great, and if the procedures employed in the study were adequate for it to represent accurately the viewpoints of the children and parents tested, questions might be pondered as to why significant relationships were not found in the present study as they were found in some of the earlier, related studies (See above, pages 35-41). Some possible reasons for the failure to discover statistically significant relationships and comparisons are listed below.

Characteristics of the sample in the present study may have contributed to an outcome different from earlier studies.

The rural sample tested for the present study may have held attitudes different from those held by more urban subjects in earlier studies. For example, the children's test employed in the current research project, the PPNS-IE (Nowicki & Duke, 1974b), was administered initially to

a group of 240 children attending school in a district near Atlanta (p. 876). The differences between the rural sample of the present study and urban samples may be greater than ethnic, economic, and educational differences within rural or urban samples (See Hypotheses Ten, Eleven, and Twelve, listed above on page 90).

The sample for the present study represented 1/5 the rural kindergarten families in the county where it took place. Different attitudes may have been held by the 4/5 of rural kindergarten families not tested.

All the parents tested in the present study were mothers except two. If more fathers had been included, they might have expressed attitudes different from those in the study. For example, if it more often falls to fathers in rural cultures to administer discipline to the children, the views of these fathers might show a more direct relationship, and a clearly significant one, to locus of control.

Tests used in the present study were developed to measure the same or similar phenomena as those reviewed in the literature but were by no means the same instruments as those employed in most of the studies reviewed, and the combination of instruments used was different from that used in any of the earlier studies.

The reasons mentioned above for the lack of significant findings have to do with possible deficiencies in the study. But if deficiencies or their possibility can be put aside, and if the results of the study can be considered

correct, it appears that the parental attitudes tested in the present study do not have a significant impact upon the kindergarten children's locus of control. In the light of this possibility questions need to be raised as to what does influence the development of the children's locus of control. Some of the possibilities are discussed below.

The children's interpretations of their situations with regard to control may be quite different from those of their parents. For example, parents who may consider themselves to be highly controlling may have children who perceive themselves as being in control. Such a possibility is not inconsistent with studies which have found children's reports of parental behavior and outsiders' observations of parental behavior more predictive of children's locus of control than parental attitudes toward the children (See above, page 43).

Parents' consistency in relating to their children may be a greater factor in the children's perception of control than other parental behaviors or attitudes. It may be that even children who are frequently but predictably punished by their parents can adapt to that parental behavior better than they could to inconsistent parental behavior, and that unpredictable behavior could contribute to an external locus of control. Studies lending support to this idea are cited above on page 12.

Rising costs due to inflation and the working of both parents to meet that challenge may have removed one or

both parents from the home during more of the time the children are home than may have been true at the time of earlier studies. Also there may be more one-parent homes than before, with a resulting loss of parental influence on the children.

Although the children tested had been in school for only about five months, the influence of adults and children at school may have been larger in relation to home influences than in times when parents spent somewhat more time with their children and gave them more attention.

With parents spending less time with their children, the influence of other children in the neighborhood, whether siblings or peers outside the family, may have taken a place of larger importance than before.

The influence of television on children may tend to decrease the influence of their parents on the growth of the children's attitudes. With less time spent with their parents and with more time spent watching television than before, children may be getting more television influence in relation to the influence of their parents than before.

Children are able to view the life styles of many different kinds of families in the various family programs that are presented during their waking hours. The interactions between parents and children portrayed on these programs could influence the development of the children's locus of control. For example, the children's own parents might take a highly controlling, authoritarian approach, but the child

might think of his or her interaction with the parents more in terms of the possibly more democratic or permissive one shown on television, with a resulting locus of control influence more internal than the parental attitudes would tend to predict.

Influence toward the development of a more external locus of control could be coming from the portrayal of violence on television. If there is violent content in many of the programs viewed by children, they could get the idea that there is nothing they can do about the powerful forces that are so frequently in conflict, an idea that might contribute to a sense of powerlessness and an external locus of control.

#### Conclusions and Recommendations

Parental attitudes may not be adequate indicators of parental influences upon children's locus of control. Reports of children's perceptions of parental behavior and attitudes seem to reveal more what the meaning of these parental influences may be to the children. Perhaps future research should focus more on the children's perceptions and interpretations of parental behavior and less on the parents' views of their own attitudes and behavior.

Instruments to measure preschool children's locus of control seem to be in need of further refinement in order to make them more capable of expressing the children's locus of control. Discussion of each question or statement may be necessary in order for the examiner to be sure that

the child understands the intent of the question and is able to communicate his or her answer.

Parents may not have as much influence on their children as in times past. Other possible influences on the child's locus of control not in the scope of the present study may need to be explored. These include peers in the home and neighborhood, adults and children at school, and the frequent viewing of television.

Future studies could compare the parental influences of fathers compared to mothers.

The differential relationships of fathers with sons or daughters and mothers with sons or daughters might also be explored more fully for locus of control influences.

There also seems to be a need to pursue the testing of locus of control in its various dimensions (See above, pages 21-25) in order to make more accurate predictions of locus of control relationships. More instruments or further refinements of present instruments are needed before this step can be taken.

Better financed studies could facilitate the employing of more than one kind of approach. Case histories could provide insights that can be gained by an indepth approach. Studies limited to one classroom or one school could provide opportunity, too, for a level of acquaintance not possible in the present study. And larger studies could be made as well, with results more generally applicable.

One of the most important areas for further study seems to be suggested by the lack of significant relationships in the present study between externality and minority ethnic status, lower economic status, and lower educational status. It would be interesting and important to see if this finding holds true in future studies and what the comparison of rural to urban populations may be with regard to these variables.

It is hoped that the procedures, findings, and questions raised by the present study will encourage and assist others in pursuing research in the relationships between parental characteristics and children's locus of control in order that educators and counselors might know more about the origins of the vital perception in human development and experience that is known as locus of control.

APPENDIX A

LETTER TO PARENTS (Example)  
( ) Elementary School

February , 1978

Dear (Parents' Names):

You are invited to the school from 12:00 Noon to 12:15 p.m. for Open House next Tuesday, February 14 (Valentine's Day) to visit (Child's Name) classroom and to hear about an enrichment opportunity for your kindergarten child that will be explained by Mr. Donald Bain, a graduate student from the University of Florida.

After you visit your child's classroom, please go to the Media Center from 12:15 p.m. to 1:15 p.m. where Mr. Bain will explain the enrichment experience that can help your child. It is an opinion survey which takes less than an hour for parents and which would be given in a shorter form to the children at school the next morning.

Then at 1:15 p.m. you are invited to go to the A-Quad Centrum for refreshments. You will be given directions if you need them.

We hope you can eat an early lunch before coming and join us for these activities, which ought to be a lot of fun as well as mean a lot to you, your child, and your school.

Sincerely,

( )  
Principal

-----  
Please check the box which applies to you, and please return this form tomorrow by way of your child.

☐ Yes, I expect to come.

☐ No, I will not be able to come.

☐ I could come for the enrichment experience if it were held in the morning or at night (Please circle which).

Name of Child \_\_\_\_\_

Name of Parent \_\_\_\_\_

Name of Teacher \_\_\_\_\_



APPENDIX B  
INFORMED CONSENT FORM

Permission Slip

Mr. Donald Bain, a graduate student at the University of Florida, is asking parents of kindergarten children attending the rural schools of Alachua County to give permission to him and his helpers to give a questionnaire to the parents and kindergarten children about how they feel about being able to control things that happen to them, a questionnaire to the parents about their ideas on raising children, and some short information questions such as, "Do you live inside or outside the city limits?"

There are no right or wrong answers to the questions or the statements, just opinions. The opinions will be given by marking "yes" or "no" or "A" or "B" with a pencil. No names will be signed. The results will be confidential except that answers can be shared with parents or school staff members. The questions should take less than an hour for parents and about a half hour for the children. You will not be paid, but the questions can help you to know your child better. Mr. Bain is available (378-1945) to discuss any questions you may have about this study or its results. If you give permission but change your mind later, it is all right.

Statement of Permission (required by the University of Florida to protect your civil rights): "I have read and I understand the procedure described above. I agree to participate in the procedure, and I have received a copy of this description."

The name of your kindergarten child \_\_\_\_\_

Signed: \_\_\_\_\_  
(Parent, Parents, or Person in charge of the child)

Witness: \_\_\_\_\_  
(Another adult)

Date: \_\_\_\_\_

# APPENDIX C

## ADULT NOWICKI-STRICKLAND SCALE

"I want to ask you some questions about how you feel about some things. Please circle Yes or No for each question, using this answer sheet. Please give the closest answer you can to your own opinion, even if you are not sure. Answer according to what the words mean to you; just use your own judgment. Instead of asking for an explanation, just circle the answer that you think is closest to your own ideas, No or Yes. Some of the words may be dim or hard to read; but don't worry--I will read them to you. You will have time at the end to go back and finish any you leave out. All right--let's begin with Number 1."

- |             |            |
|-------------|------------|
| 1. Yes No   | 21. Yes No |
| 2. Yes No   | 22. Yes No |
| 3. Yes No   | 23. Yes No |
| 4. Yes No   | 24. Yes No |
| 5. Yes No   | 25. Yes No |
| 6. Yes No   | 26. Yes No |
| 7. Yes No   | 27. Yes No |
| 8. Yes No   | 28. Yes No |
| 9. Yes No   | 29. Yes No |
| 10. Yes No  | 30. Yes No |
| 11. Yes No  | 31. Yes No |
| 12. Yes No  | 32. Yes No |
| 13. Yes No  | 33. Yes No |
| 14. Yes No  | 34. Yes No |
| 15. Yes No  | 35. Yes No |
| 16. Yes No  | 36. Yes No |
| 17. Yes No  | 37. Yes No |
| 18. Yes No  | 38. Yes No |
| 19. Yes No  | 39. Yes No |
| 20. Yes No. | 40. Yes No |

## APPENDIX C (Continued)

ADULT NOWICKI-STRICKLAND  
INTERNAL-EXTERNAL CONTROL SCALE (ANS-IE)  
(Answered in the External Direction)

Item

- |   |     |
|---|-----|
| 1. Do you believe that most problems will solve themselves if you just don't fool with them?                        | Yes |
| 2. Do you believe that you can stop yourself from catching a cold?  | No  |
| 3. Are some people just born lucky?   | Yes |
| 4. Most of the time do you feel that getting good grades meant a great deal to you?                                 | No  |
| 5. Are you often blamed for things that just aren't your fault?   | Yes |
| 6. Do you believe that if somebody studies hard enough he or she can pass any subject?                              | No  |
| 7. Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway?         | Yes |
| 8. Do you feel that if things start out well in the morning that it's going to be a good day no matter what you do? | Yes |
| 9. Do you feel that most of the time parents listen to what their children have to say?                             | No  |
| 10. Do you believe that wishing can make good things happen?  | Yes |
| 11. When you get punished does it usually seem it's for no good reason at all?                                      | Yes |
| 12. Most of the time do you find it hard to change a friend's (mind) opinion?                                       | Yes |

## APPENDIX C (Continued)

<u>Item</u>	
13. Do you think that cheering more than luck helps a team to win?	No
14. Did you feel that it was nearly impossible to change your parent's mind about anything?	Yes
15. Do you believe that parents should allow children to make most of their own decisions?	No
16. Do you feel that when you do something wrong there's very little you can do to make it right?	Yes
17. Do you believe that most people are just born good at sports?	Yes
18. Are most of the other people your age stronger than you are?	Yes
19. Do you feel that one of the best ways to handle most problems is just not to think about them?	Yes
20. Do you feel that you have a lot of choice in deciding whom your friends are?	No
21. If you find a four leaf clover, do you believe that it might bring you good luck?	Yes
22. Did you often feel that whether or not you did your homework had much to do with what kind of grades you got?	No
23. Do you feel that when a person your age is angry at you, there's little you can do to stop him or her?	Yes
24. Have you ever had a good luck charm?	Yes
25. Do you believe that whether or not people like you depends on how you act?	No

## APPENDIX C (Continued)

<u>Item</u>	
26. Did your parents usually help you if you asked them to?	No
27. Have you felt that when people were angry with you it was usually for no reason at all?	Yes
28. Most of the time, do you feel that you can change what might happen tomorrow by what you do today?	No
29. Do you believe that when bad things are going to happen they just are going to happen no matter what you try to do to stop them?	Yes
30. Do you think that people can get their own way if they just keep trying?	No
31. Most of the time do you find it useless to try to get your own way at home?	Yes
32. Do you feel that when good things happen they happen because of hard work?	No
33. Do you feel that when somebody your age wants to be your enemy there's little you can do to change matters?	Yes
34. Do you feel that it's easy to get friends to do what you want them to do?	No
35. Do you usually feel that you have little to say about what you get to eat at home?	Yes
36. Do you feel that when someone doesn't like you there's little you can do about it?	Yes
37. Did you usually feel that it was almost useless to try in school because most other children were just plain smarter than you are?	Yes
38. Are you the kind of person who believes that planning ahead makes things turn out better?	No

## APPENDIX C (Continued)

Item

- |     |   |     |
|-----|---|-----|
| 39. | Most of the time, do you feel that you have little to say about what your family decides to do? | Yes |
| 40. | Do you think it's better to be smart than to be lucky?  | No  |

# APPENDIX D

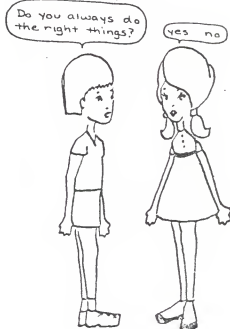
## PRE-SCHOOL AND PRIMARY NOWICKI-STRICKLAND INTERNAL-EXTERNAL SCALE

# PPNSIE

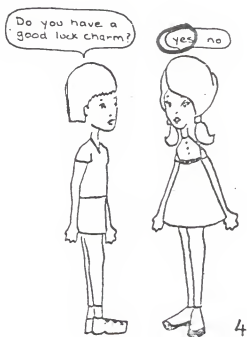
Pre-School and Primary  
Nowicki-Strickland  
Internal-External  
Scale

© S. Nowicki/M. Duke 1973

Example



## APPENDIX D (Continued)

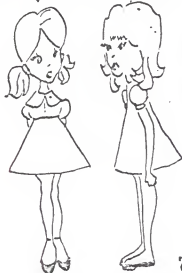




## APPENDIX D (Continued)

If you ask for something enough, will you get it?

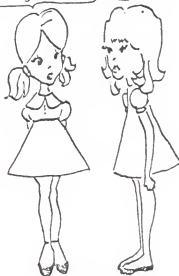
yes ☒ no



7

Do you believe that wishing can make good things happen?

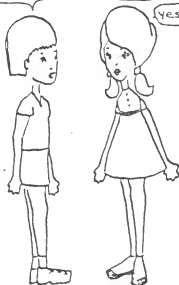
yes ☒ no



8

When a kid your age decides to hit you, is there anything you can do to stop him or her?

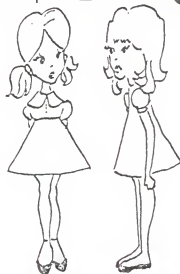
yes ☒ no



9

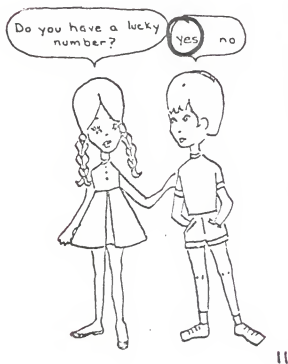
Can you get friends to do what you want them to do?

yes ☒ no

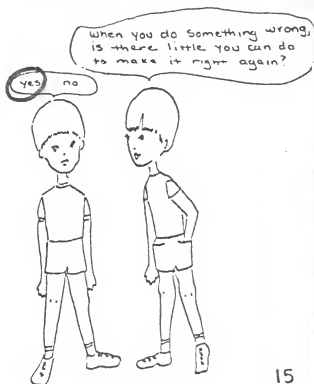


10

## APPENDIX D (Continued)



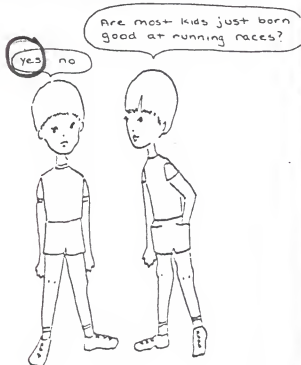
## APPENDIX D (Continued)



15



16

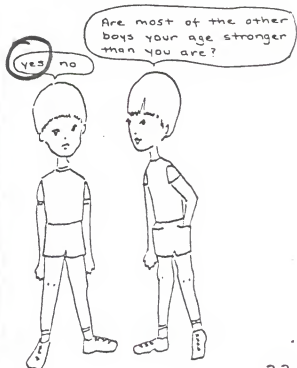
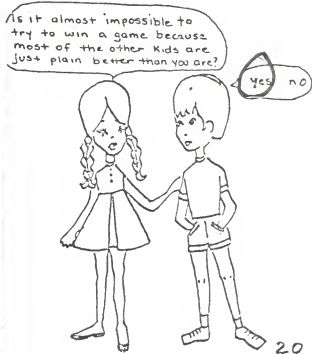
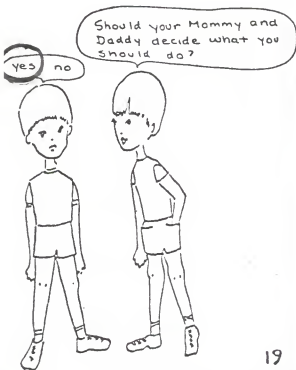


17



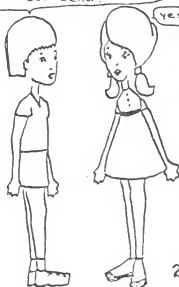
18

## APPENDIX D (Continued)



## APPENDIX D (Continued)

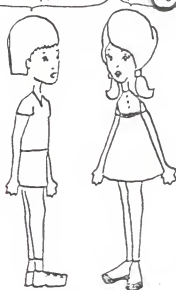
Are you the kind of child who believes that thinking about what you are going to do makes things turn out better?



yes no

23

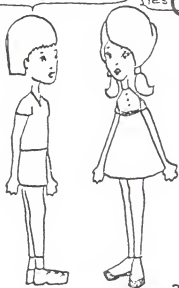
Do you think it's better to be smart than to be lucky?



yes no

24

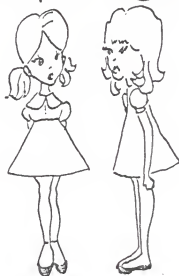
When another child hits you, is it usually because of something you did?



yes no

25

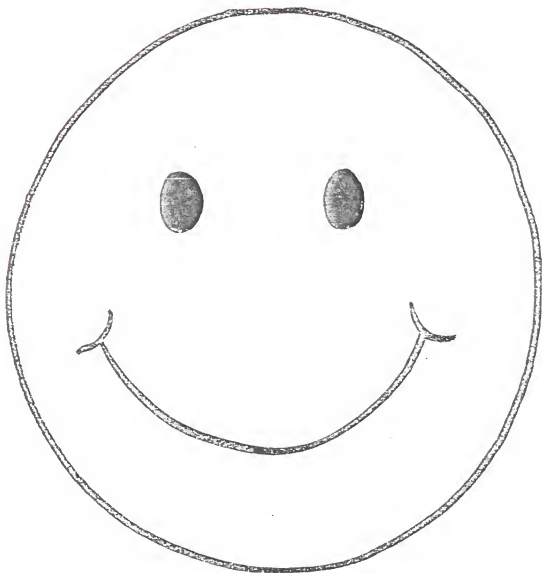
Is one of the best ways to handle a problem just not to think about it?



yes no

26

## APPENDIX D (Continued)



Pre-School and Primary Nowicki-Strickland  
Internal-External Scale (PPNS-IE)

Answer Sheet  
(Answered in the External Direction)

- 
1. yes no
  2. no yes
  3. yes no
  4. no yes
  5. yes no
  6. no yes
  7. yes no
  8. no yes
  9. yes no
  10. no yes
  11. yes no
  12. no yes
  13. yes no
  14. no yes
  15. yes no

- 
16. no yes
  17. yes no
  18. no yes
  19. yes no
  20. no yes
  21. yes no
  22. no yes
  23. yes no
  24. no yes
  25. yes no
  26. no yes

---

Example

yes no

## APPENDIX D (Continued)

Procedure for Administering the Pre-School and Primary  
Nowicki-Strickland Internal-External Scale (PPNS-IE)

"Good morning, boys and girls. My name is (                      ).  
(Use your own further introduction to put the children at ease, for example, "I have a child at home like you" or "I like to work with boys and girls like you doing art projects.")

"Today we are going to draw some circles around two different words. The words are Yes and No. The words Yes and No tell us the way you feel about something. So be sure to answer No when you want to mean No, and be sure to answer Yes when you feel that way.

Now we will all do one question to practice. Listen to what I read as you look at the picture. Now decide what your answer will be, and circle the word Yes (Nod your head up and down, and hold up the card that says Yes) or No (Nod your head back and forth, and hold up the card that says No).

Watch out that you circle the correct number. Do your own work--don't look at your friend's paper, and he or she won't look at yours.

All right--let's try a question for practice." (Read the example; then read the other questions).



# APPENDIX E

## MARYLAND PARENT ATTITUDE SURVEY

by  
DONALD K. PUMROY

"Directions: This survey is concerned with parents' attitudes toward child-rearing. At first, you will probably find it difficult, but as you proceed, it will go more rapidly.

Below are 95 pairs of statements on attitudes toward child-rearing. Your task is to choose ONE of the pair (A or B) that precedes that statement. Thus,

(A) Parents should like their children.

(B) Parents frequently find children a burden.

Note that in some cases it will seem that both represent the way you feel, while, on other occasions, neither represents your point of view. In both cases, however, you are to choose the one that MOST represents your point of view. As this is sometimes difficult to do, the best way to proceed is to put down your first reaction. Please pick one from each of the pairs.

Instead of asking for an explanation, please circle the answer that is closest to your own, A or B. You will have time at the end to go back and finish any you leave out. All right--let's begin with Number 1."

1. A B	10. A B	25. A B	40. A B	56. A B	71. A B	86. A B
2. A B	11. A B	26. A B	41. A B	57. A B	72. A B	87. A B
3. A B	12. A B	27. A B	42. A B	58. A B	73. A B	88. A B
4. A B	13. A B	28. A B	43. A B	59. A B	74. A B	89. A B
5. A B	14. A B	29. A B	44. A B	60. A B	75. A B	90. A B
6. A B	15. A B	30. A B	45. A B	61. A B	76. A B	91. A B
7. A B	16. A B	31. A B	46. A B	62. A B	77. A B	92. A B
8. A B	17. A B	32. A B	47. A B	63. A B	78. A B	93. A B
9. A B	18. A B	33. A B	48. A B	64. A B	79. A B	94. A B
	19. A B	34. A B	49. A B	65. A B	80. A B	95. A B
	20. A B	35. A B	50. A B	66. A B	81. A B	
	21. A B	36. A B	51. A B	67. A B	82. A B	
	22. A B	37. A B	52. A B	68. A B	83. A B	
	23. A B	38. A B	53. A B	69. A B	84. A B	
	24. A B	39. A B	54. A B	70. A B	85. A B	
			55. A B			

## APPENDIX E (Continued)

1. A. Parents know what is good for their children.  
B. A good leather strap makes children respect parents.
2. A. Parents should give some explanations for rules and restrictions.  
B. Children should never be allowed to break a rule without being punished.
3. A. Parents do much for their children with no thanks in return.  
B. Children should have tasks that they do without being reminded.
4. A. Parents should sacrifice everything for their children.  
B. Children should obey their parents.
5. A. Children should follow the rules their parents put down.  
B. Children should not interfere with their parents' night out.
6. A. Parents should watch their children all the time to keep them from getting hurt.  
B. Children who always obey grow up to be the best adults.
7. A. Children should never be allowed to talk back to their parents.  
B. Parents should accompany their children to the places they want to go.
8. A. Children should learn to keep their place.  
B. Children should be required to consult their parents before making any important decisions.
9. A. Quiet, well-behaved children will develop into the best type of grown-up.  
B. Parents should pick up their child's toys if he doesn't want to to it himself.
10. A. Parents should do things for their children.  
B. A child's life should be as pleasant as possible.
11. A. Watching television keeps children out of the way.  
B. Children should never be allowed to talk back to their parents.
12. A. Personal untidiness is a revolt against authority so parents should take the matter in hand.  
B. A good child always asks permission before he does anything so he doesn't get into trouble.
13. A. Sometimes children make parents so mad they see red.  
B. Parents should do things for their children.
14. A. Children should be taught to follow the rules of the game.  
B. A child's life should be as pleasant as possible.

## APPENDIX E (Continued)

15. A. Parents should cater to their children's appetites.  
B. Many parents wonder if parenthood is worthwhile.
16. A. A child's life should be as pleasant as possible.  
B. Sometimes children make their parents so mad they see red.
17. A. Children should not tell anyone their problems except their parents.  
B. Children should play whenever they feel like it in the house.
18. A. A good form of discipline is to deprive a child of the things that he really wants.  
B. Children should do what they are told without arguing.
19. A. Children should be taken to and from school to make sure there are no accidents.  
B. Children who always obey grow up to be the best adults.
20. A. Many parents wonder if parenthood is worthwhile.  
B. Children should be required to consult their parents before making any decisions.
21. A. If a child doesn't like a particular food, he should be made to eat it.  
B. Children should have lots of gifts and toys.
22. A. Children should play whenever they feel like it in the house.  
B. Good children are generally those who keep out of their parents' way.
23. A. Children never volunteer to do anything around the house.  
B. Parents should pick up their child's toys if he doesn't want to do it himself.
24. A. Good children are generally those who keep out of their parents' way.  
B. Children should not be allowed to play in the living room.
25. A. Modern children talk back to their parents too much.  
B. Children should be required to consult their parents before making any decisions.
26. A. Parents should make it their business to know everything their children are thinking.  
B. Children never volunteer to do any work around the house.
27. A. Children should come immediately when their parents call.  
B. Parents should give surprise parties for their children.

## APPENDIX E (Continued)

- 28. A. Good parents overlook their children's shortcomings.  
B. Watching television keeps children out of the way.
- 29. A. Parents should watch their children all the time to keep them from getting hurt.  
B. A child should never be forced to do anything he doesn't want to do.
- 30. A. Television keeps children out of the way.  
B. The most important thing to teach children is discipline.
- 31. A. Children should do what they are told without arguing.  
B. Parents know how much a child needs to eat to stay healthy.
- 32. A. Television keeps children out of the way.  
B. A child needs someone to make judgments for him.
- 33. A. Modern children talk back to their parents too much.  
B. Parents should amuse their children if no playmates are around to amuse them.
- 34. A. Good children are generally those who keep out of their parents' way.  
B. Parents should pick up their child's toys if he doesn't want to do it himself.
- 35. A. Parents should see to it that their children do not learn bad habits from others.  
B. Good parents lavish their children with warmth and affection.
- 36. A. Parents shouldn't let their children tie them down.  
B. Modern children talk back to their parents too much.
- 37. A. Children who destroy any property should be severely punished.  
B. Children cannot make judgments very well for themselves.
- 38. A. Most parents are relieved when their children finally go to sleep.  
B. Parents should hide dangerous objects from their children.
- 39. A. Children should not be allowed to play in the living room.  
B. Children should play whenever they feel like it in the house.
- 40. A. Parents should give surprise parties for their children.  
B. Most parents are relieved when their children finally go to sleep.
- 41. A. Children should be taken to and from school to make sure there are no accidents.  
B. Parents should clean up after their children.

## APPENDIX E (Continued)

- 42. A. Children are best when they are asleep.  
B. Personal untidiness is a revolt against authority so parents should take the matter in hand.
- 43. A. The earlier the child is toilet trained the better.  
B. A child needs someone to make judgments for him.
- 44. A. Watching television keeps children out of the way.  
B. Parents should accompany their children to the places they go.
- 45. A. The earlier the child is toilet trained the better.  
B. Good parents overlook their children's shortcomings.
- 46. A. Parents should clean up after their children.  
B. Children need their natural meanness taken out of them.
- 47. A. Parents should give surprise parties for their children.  
B. Parents should hide dangerous objects from their children.
- 48. A. Most parents are relieved when their children finally go to sleep.  
B. Children should come immediately when their parents call.
- 49. A. Children who lie should always be spanked.  
B. Children should be required to consult their parents before making any decisions.
- 50. A. Sometimes children just seem mean.  
B. Parents should see to it that their children do not learn bad habits from others.
- 51. A. Punishment should be fair and fit the crime.  
B. Parents should feel great love for their children.
- 52. A. Parents should buy the best things for their children.  
B. Children are best when they are asleep.
- 53. A. Children should be required to consult their parents before making any decisions.  
B. Parents should cater to their children's appetites.
- 54. A. Parents should have time for outside activities.  
B. Punishment should be fair and fit the crime.
- 55. A. Children should not be allowed to play in the living room.  
B. Children should not tell anyone their problems except their parents.

## APPENDIX E (Continued)

- 56. A. It seems that children get great pleasure out of disobeying their elders.  
B. Parents should watch their children all the time to keep them from getting hurt.
- 57. A. Personal untidiness is a revolt against authority so parents should take the matter in hand.  
B. Parents should buy the best things for their children.
- 58. A. Children should learn to keep their place.  
B. Good parents overlook their children's shortcomings.
- 59. A. Parents should accompany their children to the places that they want to go.  
B. Good parents overlook their children's shortcomings.
- 60. A. Children do many things just to torment their parents.  
B. Parents should insist that every one of their commands be obeyed.
- 61. A. Children should come immediately when their parents call.  
B. Parents should hide dangerous objects from their children.
- 62. A. Children do many things just to torment a parent.  
B. Children should be protected from upsetting experiences.
- 63. A. Children who lie should always be spanked.  
B. Parents should cater to their children's appetites.
- 64. A. A child should never be forced to do anything he does not want to do.  
B. It seems that children get great pleasure out of disobeying their elders.
- 65. A. Parents should keep a night light on for their children.  
B. Parents live again in their children.
- 66. A. Sometimes children make parents so mad they see red.  
B. Children should be taught to follow the rules of the game.
- 67. A. Parents should insist that every one of their commands be obeyed.  
B. Children should be protected from upsetting experiences.
- 68. A. Good children are generally those who keep out of their parents' way.  
B. Children should not tell anyone their problems except their parents.

## APPENDIX E (Continued)

- 69. A. Children who destroy property should be severely punished.  
B. Children's meals should always be ready for them when they come home from play or school.
- 70. A. Parents should frequently surprise their children with gifts.  
B. A good form of discipline is to deprive children of things that they really want.
- 71. A. Children should depend on their parents.  
B. Parents should amuse their children if no playmates are around to amuse them.
- 72. A. Many parents wonder if parenthood is worthwhile.  
B. Children who lie should always be spanked.
- 73. A. Quiet, well-behaved children will develop into the best type of grown-up.  
B. Children never volunteer to do anything around the house.
- 74. A. Children need their natural meanness taken out of them.  
B. Children should be taken to and from school to be sure that there are no accidents.
- 75. A. Children should never be allowed to talk back to their parents.  
B. Good parents overlook their children's shortcomings.
- 76. A. Parents should give their children all that they can afford.  
B. Television keeps children out of the way.
- 77. A. Children cannot make judgments very well for themselves.  
B. Children's meals should always be ready for them when they come home from play or school.
- 78. A. Sometimes children are inconvenient.  
B. Children should be reprimanded for breaking things.
- 79. A. If children misbehave they should be punished.  
B. Parents should see to it that their children do not learn bad habits from others.
- 80. A. Children are often in one's way around the house.  
B. Children seven years old are too young to spend summers away from home.
- 81. A. Children should do what they are told without arguing.  
B. Parents should frequently surprise their children with gifts.
- 82. A. Parents should feel great love for their children.  
B. Parents should have time for outside activities.

## APPENDIX E (Continued)

- 83. A. A child needs someone to make judgments for him.  
B. Good parents overlook their children's shortcomings.
- 84. A. Parents should make it their business to know everything their children are thinking.  
B. Quiet, well-behaved children will develop into the best type of grown-up.
- 85. A. Children who destroy any property should be severely punished.  
B. A good child always asks permission before he does anything so that he does not get into trouble.
- 86. A. A good form of discipline is to deprive a child of things that he really wants.  
B. Parents know how much a child needs to eat to stay healthy.
- 87. A. The most important thing to teach a child is discipline.  
B. Parents should give their children all that they can afford.
- 88. A. Parents should amuse their children if no playmates are around to amuse them.  
B. Parents shouldn't let children tie them down.
- 89. A. Parents know how much a child needs to eat to stay healthy.  
B. Parents should frequently surprise their children with gifts.
- 90. A. Sometimes children just seem mean.  
B. If children misbehave they should be punished.
- 91. A. Children should be taught to follow the rules of the game.  
B. Parents should do things for their children.
- 92. A. Parents shouldn't let their children tie them down.  
B. Children should depend on their parents.
- 93. A. Children who always obey grow up to be the best adults.  
B. Parents should clean up after their children.
- 94. A. Children's meals should always be ready for them when they come home from play or school.  
B. Children do many things just to torment a parent.
- 95. A. A good child always asks permission before he does anything, so that he doesn't get into trouble.  
B. Parents should buy the best things for their children.



## APPENDIX E (Continued)

### Scoring Keys for the Maryland Parent Attitude Survey

The first choice for an item is "A" and the second is "B" (see MPAS Booklet). The numbers represent the item numbers. The scoring of the items for the different types of parents is as follows:

Disciplinarian:	6B, 7A, 9A, 11B, 12A, 14A, 18B, 19B, 21A, 24B, 25A, 27A, 30B, 31A, 33A, 36B, 37A, 39A, 42B, 43A, 45A, 48B, 49A, 51A, 54B, 55A, 57A, 60B, 61A, 63A, 66B, 67A, 69A, 72B, 73A, 75A, 78B, 79A, 81A, 84B, 85A, 87A, 90B, 91A, 93A.
Indulgent:	9B, 10B, 14B, 15A, 16A, 17B, 21B, 22A, 23B, 27B, 28A, 29B, 33B, 34B, 35B, 39B, 40A, 41B, 45B, 46A, 47A, 51B, 52A, 53B, 57B, 58B, 59B, 63B, 64A, 65B, 69B, 70A, 71B, 75B, 76A, 77B, 81B, 82A, 83B, 87B, 88A, 89B, 93B, 94A, 95B.
Protective:	6A, 7B, 8B, 10A, 12B, 13B, 17A, 19A, 20B, 25B, 26A, 29A, 31B, 32B, 35A, 37B, 38B, 41A, 43B, 44B, 47B, 49B, 50B, 53A, 55B, 56B, 59A, 61B, 62B, 65A, 67B, 68B, 71A, 74B, 77A, 79B, 80B, 83A, 84A, 85B, 86B, 89A, 91B, 92B, 95A.
Rejecting:	8A, 11A, 13A, 15B, 16B, 18A, 20A, 22B, 23A, 24A, 26B, 28B, 30A, 32A, 34A, 36A, 38A, 40B, 42A, 44A, 46B, 48A, 50A, 52B, 54A, 56A, 58A, 60A, 62A, 64B, 66A, 68A, 70B, 72A, 73B, 74A, 76B, 78A, 80A, 82B, 86A, 88B, 90A, 92A, 94B.

## APPENDIX F

### DEMOGRAPHIC QUESTIONS

(To be asked of parents and recorded by the examiner)

(To be filled in without asking):

Sex of child \_\_\_\_\_

Race of child \_\_\_\_\_

(To be asked verbally):

"Thank you very much for doing the questionnaires.  
Now, before we go, would you please answer a few questions?  
These answers will be kept confidential."

1. What-school does (son or daughter) go to?
2. Do you live inside or outside the city limits?
3. When is (son or daughter's) birthday? What year?
4. How many brothers and sisters does (son or daughter) have? How many are older? How many are younger?
5. Are there any other grownups living in your home?  
Are they the Mother, Father, Grandparent, Other \_\_\_\_\_
6. What age group are you in?

	<u>Mr.</u>	<u>Mrs.</u>
Under 20	_____	_____
20-29	_____	_____
30-39	_____	_____
40-49	_____	_____
Over 50	_____	_____

7. Have you been with (son or daughter) all (his, her) life? If not, how many years?
8. What do you do for a living? (Mr.; Mrs.)
9. What group is your family income in?

Under \$5,000	_____
Under 10,000	_____
Under 15,000	_____
Under 20,000	_____
10. How far did you go in school? (Mr.; Mrs.)

"Your name will not be connected with these answers--  
they will just be used with a group of other answers."

"Thank you very much."

## REFERENCES

- Abrahamson, D., Schludermann, S., & Schludermann, E. Replication of dimensions of locus of control. Journal of Consulting and Clinical Psychology, 1973, 41, 320.
- Abramowitz, S.I. Locus of control and self-reported depression among college students. Psychological Reports, 1969, 25, 149-150.
- Altrocchi, P., Palmer, J., Hellman, R., & Davis, H. The Marlowe-Crowne, repressor-sensitizer, and internal-external scales and attribution of hostile intent. Psychological Reports, 1968, 23, 1229-1230.
- Baldwin, A.L., Kalhorn, J., & Breese, F.H. The appraisal of parent behavior. Psychological Monographs, 1949, 63, (Whole No. 299).
- Battle, E., & Rotter, J.B. Children's feelings of personal control as related to social class and ethnic groups. Journal of Personality, 1963, 31, 482-490.
- Berman, A.L., & Hays, J.E. Relation between death anxiety, belief in afterlife, and locus of control. Journal of Consulting and Clinical Psychology, 1973, 41, 320.
- Bialer, I. Conceptualization of success and failure in mentally retarded and normal children. Journal of Personality, 1961, 29, 303-320.
- Black, J.D. (Ed.) The D48 Test manual. Palo Alto: Consulting Psychologists Press, 1962.
- Brody, G.F. The relationship between maternal attitudes and mother-child interaction. Paper read at Eastern Psychological Association, Philadelphia, Pennsylvania, April, 1964.
- Butterfield, E.C. Locus of control, test anxiety, reaction to frustration, and achievement attitudes. Journal of Personality, 1964, 32, 298-311.

- Cardi, M. An examination of internal versus external control in relation to academic failures. Unpublished master's thesis, Ohio State University, 1962.
- Cellura, A.R. Internality as a determinant of academic achievement in low SES adolescents. Unpublished manuscript, University of Rochester, 1963.
- Chance, J.E. Internal control of reinforcements and the school learning process. Paper presented at the biennial meeting of the Society for Research in Child Development, Minneapolis, March, 1965.
- Coleman, J.S., Campbell, E.Q., Hobson, C.J., McPartland, J., Mood, A.M., Weinfeld, F.D., & York, R.L. Equality of educational opportunity. Superintendent of Documents Catalog No. FS 5.238: 38001, U.S. Government Printing Office, Washington, D.C., 1966.
- Collins, B.E. Four separate components of the Rotter I-E Scale: Belief in a difficult world, a just world, a predictable world, and a politically responsible world. Journal of Personality and Social Psychology, 1974, 29, 381-391.
- Cone, J.D. Locus of control and social desirability. Journal of Consulting and Clinical Psychology, 1971, 36, 499.
- Coopersmith, S. The antecedents of self-esteem. San Francisco: Freeman, 1968.
- Crandall, V.C., Crandall, V.J., & Katkovsky, W. A children's social desirability questionnaire. Journal of Consulting Psychology, 1965, 29, 27-36.
- Crandall, V.C., Katkovsky, W., & Crandall, V.J. Children's beliefs in their own control of reinforcement in intellectual-academic achievement situations. Child Development, 1965, 36, 91-109.
- Crandall, V.J., Katkovsky, W., & Preston, A. Motivational and ability determinants of young children's intellectual achievement behaviors. Child Development, 1962, 33, 643-661.
- Cromwell, R.L. A social learning approach to mental retardation. In N.R. Ellis (Ed.), Handbook of mental deficiency. New York: McGraw-Hill, 1963.

- Cromwell, R. L., Rosenthal, D., Shakow, D., & Zahn, T. P. Reaction time, locus of control, choice of behavior, and description of parental behavior in schizophrenic and normal subjects. Journal of Personality, 1961, 29, 363-379.
- Cronbach, L. J., & Meehl, P. E. Construct validity in psychological tests. Psychological Bulletin, 1955, 52, 218-302.
- Davis, W. L. Parental antecedents of children's locus of control. Unpublished doctoral dissertation, Kansas State University, 1969.
- Davis, W. L., & Phares, E. J. Parental antecedents of internal-external control of reinforcement. Psychological Reports, 1969, 24, 427-436.
- Devereux, E. C., Bronfenbrenner, U., & Rodgers, R. R. Child-rearing in England and the United States: A cross-national comparison. Journal of Marriage and the Family, 1969, 31, 257-270.
- Duke, M., & Mullens, C. Interpersonal distance as a function of locus of control in hospitalized schizophrenics and nonschizophrenics. Paper presented at annual meeting of Southeastern Psychological Association, Atlanta, 1972.
- Duke, M., & Nowicki, S. A new measure and social learning model for interpersonal distance. Journal of Experimental Research in Personality, 1972, 6, 119-132.
- Eligibility Income Scale Levels for Free and Reduced Meals, Alachua County Schools, August, 1977.
- Epstein, R., & Komorita, S. S. Self-esteem, success-failure, and locus of control in Negro children. Developmental Psychology, 1971, 4, 2-8.
- Fazio, A. F., & Hendricks, D. E. Effects of chance versus skill instructional set and partial reinforcement on resistance to extinction. Proceedings, 78th Annual Convention of the American Psychological Association. Washington, D. C., 1970.
- Feather, N. T. Some personality correlates of external control. Australian Journal of Psychology, 1967, 19, 253-260.
- Franklin, R. D. Youth's expectancies about internal versus external control of reinforcement related to N variables. Unpublished doctoral dissertation, Purdue University, 1963.

- Freud, S. The standard edition of the complete psychological works. London: Hogarth Press, 1953.
- Gold, D. Some correlation coefficients: Relationships among I-E scores and other personality variables. Psychological Reports, 1968, 22, 983-984.
- Gore, P. M., & Rotter, J. B. A personality correlate of social action. Journal of Personality, 1963, 33, 58-64.
- Goss, A., & Morosko, I. E. Relations between a dimension of internal-external control and the MMPI with an alcoholic population. Journal of Consulting and Clinical Psychology, 1970, 34, 189-192.
- Gough, H. G. Reference handbook for the Gough Adjective Check List. Berkeley: University of California Institute of Personality Assessment and Research, 1955.
- Gazali, J., & Bialer, I. Children's locus of control scale: Independence from response set bias among retardates. American Journal of Mental Deficiency, 1962, 72, 622-625.
- Graves, T. D. Time perspective and the deferred gradification pattern in a tri-ethnic community. University of Colorado, Tri-Ethnic Research Project, Research Report No. 5, 1961.
- Gruen, G. E., & Ottinger, D. R. Skill and chance orientations as determiners of problem-solving behavior in lower- and middle-class children. Psychological Reports, 1969, 24, 207-214.
- Gurin, P., Gurin, G., Lao, R. C., & Beattie, M. Internal-external control in the motivational dynamics of Negro youth. Journal of Social Issues, 1969, 25, 29-53.
- Hamsher, J. H., Geller, J. D., & Rotter, J. B. Interpersonal trust, internal-external control, and the Warren Commission Report. Journal of Personality and Social Psychology, 1968, 9, 210-215.
- Harrison, F. I. Relationship between home background, school success, and adolescent attitudes. Merrill-Palmer Quarterly, 1968, 14, 331-344.
- Hersch, P. D., & Scheibe, K. E. Reliability and validity of internal-external control as a personality dimension. Journal of Consulting Psychology, 1967, 31, 609-613.

- Hjelle, L. A., & Fink, H. C. Ideological correlates of locus of control. Paper read at the Midwestern Psychological Association meetings, Cleveland, May, 1972.
- Holden, K. B., & Rotter, J. B. A nonverbal measure of extinction in skill and chance situations. Journal of Experimental Psychology, 1962, 63, 519-520.
- Hollingshead, A. The two-factor index of social position. New Haven, Conn.: Author, 1957.
- Horner, M. A bright woman is caught in a double-bind. Psychology Today, January, 1972, 61, 36-38. .
- Houtras, P. T., & Scharf, M. C. Manifest anxiety and locus of control of low-achieving college males. Journal of Psychology, 1970, 74, 95-100.
- Isaac, S., & Michael, W. B. Handbook in research and evaluation. San Diego: Knapp, 1971.
- James, W. H. Internal versus external control of reinforcement as a basic variable in learning theory. Unpublished doctoral dissertation, Ohio State University, 1957.
- James, W. H., & Rotter, J. B. Partial and 100% reinforcement under chance and skill conditions. Journal of Experimental Psychology, 1958, 55, 397-403.
- Jessor, R., Graves, T. D., Hanson, R. C., & Jessor, S. L. Society, personality, and deviant behavior. New York: Holt, Rinehart, & Winston, 1963.
- Joe, V. C. Review of the internal-external control construct as a personality variable. Psychological Reports, 1971, 28, 619-640.
- Joe, V. C. Social desirability and the I-E Scale. Psychological Reports, 1972, 30, 44-46.
- Johnson, I., & Nowicki, S. A comparison of black and white college females interpersonal distancing responses. Paper presented at the Southeastern Psychological Association Meeting, Atlanta, 1972.
- Katkovsky, W., Crandall, V. C., & Good, S. Parental antecedents of children's beliefs in internal-external control of reinforcements in intellectual achievement situations. Child Development, 1967, 38, 765-776.
- Katz, I. The socialization of academic motivation in minority group children. In D. Levine (Ed.), Nebraska symposium on motivation. Lincoln, Neb.: University of Nebraska Press, 1967, 133-191.

- Kiehlbauch, J.B. Selected changes over time in internal-external control expectancies in a reformatory population. Unpublished doctoral dissertation, Kansas State University, 1967.
- Ladwig, G.W. Personal, situational, and social determinants of preference for delayed reinforcement. Unpublished doctoral dissertation, Ohio State University, 1963.
- Lamont, J. Item mood-level as a determinant of I-E test response. Journal of Clinical Psychology, 1972, 28, 190. (a)
- Lamont, J. Depression, locus of control, and mood response set. Journal of Clinical Psychology, 1972, 28, 342-345. (b)
- Lao, R.C. Internal-external control and component and innovative behavior among Negro college students. Journal of Personality and Social Psychology, 1970, 14, 263-270.
- Lefcourt, H.M. Internal versus external control of reinforcement revisited. Waterloo University, Research Report No. 27, 1971.
- Lefcourt, H.M. Recent developments in the study of locus of control. In B.A. Maher (Ed.), Progress in experimental personality research. Vol. 6. New York: Academic Press, 1972, 1-39.
- Lefcourt, H.M., Gronnerud, P., & McDonald, P. Cognitive activity and hypothesis formation during a double entendre word association test as a function of locus of control and field dependence. Unpublished manuscript, University of Waterloo, 1971.
- Lefcourt, H.M., & Ladwig, G.W. Alienation in Negro and white reformatory inmates. Journal of Social Psychology, 1966, 68, 153-157.
- Lefcourt, H.M., & Ladwig, G.W. The American Negro: A problem in expectancies. Journal of Personality and Social Psychology, 1965, 1, 377-380.
- Lefcourt, H.M., & Telegdi, M. Perceived locus of control and field dependence as predictors of cognitive activity. Journal of Consulting and Clinical Psychology, 1971, 37, 53-56.



- Lefcourt, H. M., & Wine, J. Internal versus external control of reinforcement and the deployment of attention in experimental situations. Canadian Journal of Behavioral Science, 1969- 1, 167-131.
- Lessing, E. E. Racial differences in indices of ego functioning relevant to academic achievement. Journal of Genetic Psychology, 1969, 115, 153-167.
- Levenson, H. Reliability and validity of the I, P, and C Scales--A multi-dimensional view of the locus of control. Paper read at the annual meeting of the American Psychological Association, Montreal, August, 1973. (a)
- Levenson, H. Perceived parental antecedents of internal, powerful others, and chance locus of control orientations. Developmental Psychology, 1973, 9, 268-274. (b)
- Levenson, H. Multidimensional locus of control in psychitric patients. Journal of Consulting and Clinical Psychology, 1973, 41, 387-404. (c)
- Liberty, P. G., Jr., Burnstein, E., & Moulton, R. W. Concern with mastery and occupational attraction. Journal of Personality, 1966, 34, 105-117.
- Loeb, R. C. Concomitants of boys' locus of control examined in parent-child interactions. Developmental Psychology, 1975, 11, 353-358.
- Lottman, T. J., & DeWolfe, A. S. Internal versus external control in reactive and process chizophrenia. Journal of Consulting and Clinical Psychology, 1972, 39, 344.
- Ludwigsen, K., & Rollins, H. Recognition of random forms as a function of cue, perceived locus of control, and socio-economic level. Paper presented at the annual meeting of the Southeastern Psychological Association, Miami Beach, Florida, April-May, 1971.
- MacDonald, A. P., Jr. Internal-external locus of control: Parental antecedents. Journal of Consulting and Clinical Psychology, 1971, 37, 141-147.
- McGhee, P. E., & Crandall, V. C. Beliefs in internal-external control of reinforcement and academic performance. Child Development, 1968, 39, 91-102.
- Miller, W. R., & Seligman, M. E. P. Depression and the perception of reinforcement. Journal of Abnormal Psychology, 1973, 82, 62-73.
- Mirels, H. L. Dimensions of internal versus external control. Journal of Consulting and Clinical Psychology, 1970, 34, 226-228.

- Mischel, W., Zeiss, R., & Zeiss, A. Internal-external control and persistence: Validation and implications of the Stanford Preschool Internal-External Scale. Journal of Personality and Social Psychology, 1974, 29, 265-278.
- Morgan, J.I. Internal versus external control correlates among counseling center clients. Doctoral dissertation, University of Florida, 1967.
- Nelson, P.C., & Phares, E.J. Anxiety, discrepancy between need value and expectancy, and internal-external control. Psychological Reports, 1971, 28, 663-668.
- Nie, H., Hull, C.H., Jenkins, J.G., Steinbrenner, K., & Bent, D.H. Statistical Package for the Social Sciences. New York: McGraw-Hill, 1975.
- Nowicki, S. Achievement and popularity as related to locus of control across different age groups. Unpublished manuscript, Emory University, 1971.
- Nowicki, S., & Barnes, J. Effects of a structured camp experience on locus of control in children. Journal of Genetic Psychology, 1973, 122, 247-252.
- Nowicki, S., & Duke, M. Locus of control and achievement: A replication of surprising findings. An unpublished manuscript, Emory University, 1972.
- Nowicki, S., & Duke, M. A locus of control scale for non-college as well as college students. Journal of Personality Assessment, 1974, 38, 136-137. (a)
- Nowicki, S., & Duke, M. A pre-school and primary internal-external control scale. Developmental Psychology, 1974, 10, 874-880. (b)
- Nowicki, S., & Roundtree, J. Correlates of locus of control in secondary school age students. Developmental Psychology, 1971, 4, 477-478.
- Nowicki, S., & Strickland, B.R. A locus of control scale for children. Journal of Consulting and Clinical Psychology, 1973, 40, 148-154.
- Otis, A.S. Manual of directions for Gamma test. New York: Harcourt, Brace, & World, 1954.
- Pappas, C., & Nowicki, S. Achievement correlates of locus of control. Paper presented at the Southeastern Psychological Association Meeting, Atlanta, 1972.
- Phares, E. J. Changes in expectancy in skill and chance situations. Unpublished doctoral dissertation, Ohio State University, 1955.

- Phares, E. J. Perceptual threshold decrements as a function of skill and chance expectancies. Journal of Psychology, 1962, 53, 399-407.
- Phares, E. J. Locus of control in personality. Morristown, N. J.: General Learning Press, 1976.
- Platt, J. J., & Eisenman, R. Internal-external control of reinforcement, time perspective, adjustment, and anxiety. Journal of General Psychology, 1968, 79, 121-128.
- Powell, A., & Centa, D. Adult locus of control and mental ability. Psychological Reports, 1972, 30, 829-830.
- Pumroy, D. K. Maryland Parent Attitude Survey: A research instrument with social desirability controlled. Journal of Psychology, 1966, 64, 73-78.
- Pumroy, D. C. Personal communication, October, 1977.
- Ray, W. J., & Katahn, M. Relation of anxiety to locus of control. Psychological Reports, 1968, 23, 1196.
- Reid, D. W., & Ware, E. E. Multidimensionality of internal versus external control: Addition of a third dimension and nondistinction of self versus others. Unpublished manuscript, University of Waterloo, 1973.
- Reimanis, G. Effects of experimental IE modification techniques and home environmental variables on IE. Paper presented at the annual meeting of the American Psychological Association, Washington, D. C., September, 1971.
- Roberts, A. The self-esteem of disadvantaged third and seventh graders. Unpublished doctoral dissertation, Emory University, 1971.
- Rotter, J. B. Generalized expectancies for internal versus external control of reinforcement. Psychological Monograph, 1966, 80, (1, Whole No. 609).
- Rotter, J. B. Social learning and clinical psychology. Englewood Cliffs, N. J.: Prentice-Hall, 1954.
- Rotter, J. B., Chance, J., & Phares, E. J. (Eds.) Applications of a social learning theory of personality. New York: Holt, Rinehart, & Winston, 1972.

- Rotter, J.B., Liverant, S., & Crowne, D.P. The growth and extinction of expectancies in chance controlled and skilled tasks. Journal of Psychology, 1961, 52, 161-177.
- Rotter, J.B., Seeman, M., & Liverant, S. Internal versus external control of reinforcement: A major variable in behavior theory. In N.F. Washburne (Ed.), Decisions, values, and groups. Vol. 2. New York: Pergamon Press, 1962, 473-516.
- Ryckman, R.M., Gold, J.A., & Rodda, W.C. Confidence rating shifts and performance as a function of locus of control, self-esteem, and initial task experience. Journal of Personality and Social Psychology, 1971, 18, 305-310.
- Schaefer, E.S. Children's reports of parental behavior: An inventory. Child Development, 1965, 36, 413-424.
- Schaefer, E.S., & Bell, R.Q. Development of a parental attitude research instrument. Child Development, 1958, 29, 349-354.
- Schaffer, S., Strickland, B., & Uhl, N. The relationship of individual difference measures to socioeconomic level and to discrimination learning. Paper presented at the annual meeting of the Southeastern Psychological Association, New Orleans, February-March, 1969.
- Schneewind, K.A. Psychological and socio-ecological aspects of parent-child relations: Overview of a research project and some selected empirical findings. Paper presented at the biennial meeting of the Society for Research in Child Development, Denver, Colorado, April 10-13, 1975.
- Schneider, J.M., & Parsons, O.A. Categories on the Locus of Control Scale and cross-cultural comparisons in Denmark and the United States. Journal of Cross-Cultural Psychology, 1970, 1, 131-138.
- Scott, J.D., & Phelan, J.G. Expectancies of unemployable males regarding source of control of reinforcement. Psychological Reports, 1969, 25, 911-913.
- Seeman, M., & Evans, J.W. Alienation and learning in a hospital setting. American Sociological Review, 1962, 27, 772-783.
- Shaw, R.L., & Uhl, N.P. Control of reinforcement and academic achievement. Journal of Educational Research, 1971, 64, 226-228.

- Shoben, E. J., Jr. The assessment of parental attitudes in relation to child adjustment. Genetic Psychology Monographs, 1949, 39, 101-148.
- Shore, R. E. Some parental correlates of boys' locus of control. Paper presented at the meeting of the Eastern Psychological Association, Washington, D. C., April, 1968.
- Shybut, J. Time perspective, internal versus external control, and severity of psychological disturbance. Journal of Clinical Psychology, 1968, 24, 312-315.
- Silvern, L. E., & Nakamura C. Y. Powerlessness, social-political action, social-political views: Their interrelations among college students. Journal of Social Issues, 1971, 27, 137-157.
- Solomon, D., Houlihan, K. A., Busse, T. V., & Parelius, R. J. Parent behavior and child academic achievement, achievement striving, and related personality characteristics. Genetic Psychology Monographs, 1971, 83, 173-273.
- Stabler, J., & Johnson, E. E. Instrumental performance as a function of reinforcement schedule, luck versus skill instructions, and sex of child. Journal of Experimental Child Psychology, 1970, 9, 330-335.
- Stephens, M. W., & Delys, P. A locus of control measure for preschool children. Developmental Psychology, 1973, 9, 55-65.
- Strassberg, D. S. Relationships among locus of control, anxiety, and valued-goal expectations. Journal of Consulting and Clinical Psychology, 1973, 41, 319.
- Strickland, B. R. Delay of gratification as a function of race of the experimenter. Journal of Personality and Social Psychology, 1972, 22, 108-112.
- Terman, L. M. Concept Mastery Test: 1956 manual. New York: Psychological Corporation, 1956.
- Thomas, L. E. The I-E Scale, ideological bias, and political participation. Journal of Personality, 1970, 38, 273-286.
- Tolor, A. An evaluation of the Maryland Parent Attitude Survey. Journal of Psychology, 1967, 67, 69-74.
- Tolor, A., & Jalowiec, J. E. Body boundary, parental attitudes, and internal0external expectancy. Journal of Consulting and Clinical Psychology, 1968, 32, 206-209.

- Tolor, A., & Reznikoff, M. Relation between insight, repression-sensitization, internal-external control, and death anxiety. Journal of Abnormal Psychology, 1967, 72, 426-430.
- Walls, R.T., & Cox, J. Expectancy of reinforcement in chance and skill tasks under motor handicap. Journal of Clinical Psychology, 1971, 27, 436-438.
- Watson, D. Relationship between locus of control and anxiety. Journal of Personality and Social Psychology, 1967, 6, 91-92.
- Williams, C.B., & Nickels, J.B. Internal-external control dimension as related to accident and suicide proneness. Journal of Consulting and Clinical Psychology, 1969, 33, 485-494.
- Wilson, J., Duke, M., & Nowicki, S. Measurement of personal space as a function of race and sex of stimulus and subjects' locus of control in preschool children. A paper presented at the Southeastern Psychological Association Meeting, Atlanta, 1972.
- Young, M. Lonely parents: Observations by public health nurses of alienation in child abuse. Paper presented as part of a doctoral program in Human Ecology at the University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma, 1976.
- Zytkoskee, A., Strickland, B.R., & Watson, J. Delay of gratification and internal versus external control among adolescents of low socioeconomic status. Developmental Psychology, 1971, 4, 93-98.

## BIOGRAPHICAL SKETCH

Donald Leland Bain was born January 22, 1934, in Bartow, Polk County, Florida, the middle child of the late Homer Andrew Bain, Methodist minister, and Leila Lavenia Daniels Bain, first grade teacher. He has an older brother, Homer Andrew Bain, Jr., of San Antonio, Texas, and a younger sister, Lehoma Bain Goode, of Winston-Salem, North Carolina.

He married Mary Elizabeth King of Miami, Florida, on September 4, 1956. Their children are Douglas Lewis Bain (adopted), born October 21, 1955; Dawn Lizabeth Bain, born November 3, 1967; and David King Bain, born July 8, 1969. The Bains moved into their present home at 2619 N. W. 11th Avenue, Gainesville, Florida, in June, 1973.

Mr. Bain attended Florida public schools in Jacksonville, Miami Beach, Tampa, High Springs, Clewiston, and Mulberry, where he graduate from high school in 1952. He was valedictorian of the graduating class, president of the Senior Class, president of the Student Body, and winner of the International Minerals and Chemical Corporation college scholarship for Polk County.

Mr. Bain graduated from the University of Florida with a Bachelor of Arts degree in Political Science in 1956. In college he was a resident of Georgia Seagle Hall Co-operative and the University Methodist Church; a member of Phi Eta Sigma scholastic honorary; elected to Sophomore Executive

Council of Student Government; president of the Student Religious Association; president of the Wesley Foundation Methodist Student Center; a member of the Debate Club; a letterman on the Southeastern Conference Championship Varsity Track Team; and a member of Florida Blue Key.

Mr. Bain attended Union Theological Seminary in New York City from 1956 to 1959 when he graduated with a Master of Divinity degree with a major in Old Testament. He was Student Assistant Minister for those three years at the Union Evangelical Church of Corona, Long Island.

In 1971 Mr. Bain entered graduate school at the University of Florida on a part-time basis in the counselor education program, graduating in 1974 with Master of Education and Specialist in Education degrees. He is scheduled to graduate in 1978 with a Doctor of Philosophy degree in counselor education in the field of community agency counseling, with a minor in psychology. Individual research included a study of counseling and camping with third grade boys and their parents and a study of counseling and gardening with first grade boys and girls and their parents. Internships in counseling were at the Florida Correctional Institution in Bradford County, and with young people under the supervision of the Division of Youth Services of the State of Florida in Gainesville, Madison, and Ocala.

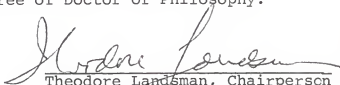
Mr. Bain has been a ministerial member of the Florida Annual Conference of the Methodist Church since 1957 and has served as Pastor of churches in Key Largo, Leesburg,



Tampa, Lake Worth, Margate, Hawthorne, and Micanopy. Mr. Bain is Assistant Chaplain at the Shands Teaching Hospital of the J. Hillis Miller Health Center at the University of Florida. He plans to go into private practice as a counselor with a special interest in family counseling.

Hobbies and interests include writing, music, outdoor recreation, jogging, languages, travel, genealogy, and drama. Mr. Bain writes for church publications; is a member of the Gainesville Chapter of the Society for the Preservation and Encouragement of Barbershop Quartet Singing in America, the Barbergators; is president of Community-in-the-Woods, Inc., a nonprofit organization for counseling in relation to out-door activities; has studied Spanish, German, Hebrew, and Greek; is a student of Mexican culture; is a charter member of the Scottish Clan Mackay Society of North America; and has been an actor and patron of the Gainesville Little Theater.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



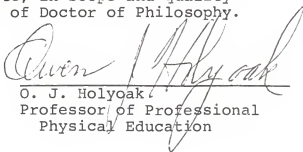
Theodore Landsman, Chairperson  
Professor of Psychology and  
Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



E. L. Tolbert  
Associate Professor of  
Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality as a dissertation for the degree of Doctor of Philosophy.



O. J. Holyoak  
Professor of Professional  
Physical Education

This dissertation was submitted to the Graduate Faculty of the Department of Counselor Education in the College of Education and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

June, 1978

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Dean, Graduate School